R, Y – Monday, 27 May 2019 – 09:12:33

Subject	Objection to Origin's Kyalla frack site in the NT
From	YR
Sent	27/05/2019 9:12:33 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Y R

This email was sent by Y R via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Y provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Y R at *********.

Raab, Doris - Thursday, 23 May 2019 - 23:17:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Doris Raab
Sent	23/05/2019 11:17:00 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Doris Raab

This email was sent by Doris Raab via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Doris provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Doris Raab at *********.

Rabbitt, Helene - Thursday, 23 May 2019 - 21:22:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helene Rabbitt
Sent	23/05/2019 9:22:00 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Helene Rabbitt Hamilton, New South Wales, 2303, Australia

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Please reply to Helene Rabbitt at *********.

Rabie, Jeremy – Wednesday, 29 May 2019 – 20:08:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jeremy Rabie
Sent	29/05/2019 8:08:54 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Jeremy Rabie Lavender Bay, New South Wales, 2060, Australia

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Please reply to Jeremy Rabie at *********.

Raby, Kara – Friday, 24 May 2019 – 09:23:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kara Raby
Sent	24/05/2019 9:23:37 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Yours sincerely, kara Raby Rochedale South, Queensland, 4123, Australia

This email was sent by kara Raby via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however kara provided an email address (**********) which we included in the REPLY-TO field.

Please reply to kara Raby at *********.

Radford, Gill – Thursday, 23 May 2019 – 18:28:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gill Radford
Sent	23/05/2019 6:28:37 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Gill Radford

This email was sent by Gill Radford via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gill provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Gill Radford at *********.

Radford, Gillian – Wednesday, 29 May 2019 – 13:03:10

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Gillian Radford
Sent	29/05/2019 1:03:10 PM

Don't agree with fracking please stop

Gillian Radford *********** WA 6122

Radford, Stella – Wednesday, 29 May 2019 – 07:45:41

Subject	!!Objection to Origin's Kyalla frack site in the NT
From	Stella Radford
Sent	29/05/2019 7:45:41 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Stella Radford via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Stella provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Stella Radford at *********.

Raffin, Nikko – Wednesday, 29 May 2019 – 14:32:22

Subject	no fracking anywhere ever !!!
From	Nikko Raffin
Sent	29/05/2019 2:32:22 PM

wake up now - we all live on this earth & we need her to be well / stop your messing with it & us . . PS Blessing your souls awakening

nikko raffin ************* NSW 2484

Rahilly, Mary - Thursday, 30 May 2019 - 06:09:31

Subject	Objection to Origin's Kyalla frack site in the NT
From	Mary Rahilly
Sent	30/05/2019 6:09:31 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Mary Rahilly Karingal, Victoria, 3199, Australia

This email was sent by Mary Rahilly via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Mary provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Mary Rahilly at *********.

Raicu, Lucian - Saturday, 25 May 2019 - 22:12:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lucian Raicu
Sent	25/05/2019 10:12:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Please reply to Lucian Raicu at *********.

Raik, Eva - Thursday, 30 May 2019 - 02:34:20

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Eva Raik
Sent	30/05/2019 2:34:20 AM

Fracking damages the soil and atmosphere. There have been insufficient consultations with the traditional owners of the land.

Rainer, Kerry – Tuesday, 28 May 2019 – 20:25:49

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Kerry Rainer
Sent	28/05/2019 8:25:49 PM

I strongly object to this proposal.

If allowed to go ahead, this proposal threatens our safe climate future and threatens the future of our children and generations to come.

We should be investing in clean, safe and environmentally friendly renewable's, like wind and solar power to source our future energy needs and secure a safe climate future.

The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources. How can a proposal that that threatens our health, the environment and our precious water be allowed to go ahead!?

The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process. In this context it is not appropriate to proceed with the current exploration permit without further consultation with Traditional owners.

I urge you to reject this proposal on the above grounds.

Kerry Rainer ************** VIC 3199

Raj, Tan – Saturday, 25 May 2019 – 09:15:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tan Raj
Sent	25/05/2019 9:15:25 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Tan Raj

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Please reply to Tan Raj at *********.

Ralph, Ingrid – Thursday, 23 May 2019 – 19:48:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ingrid Ralph
Sent	23/05/2019 7:48:02 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Ingrid Ralph

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Please reply to Ingrid Ralph at *********.

Ralph, Liz – Wednesday, 29 May 2019 – 18:07:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Liz Ralph
Sent	29/05/2019 6:07:26 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Liz Ralph Brunswick East, Victoria, 3057, Australia

This email was sent by Liz Ralph via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Liz provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Liz Ralph at *********.

Ralston, Chris – Thursday, 30 May 2019 – 10:58:50

Subject	Objection to Origin's Kyalla frack site in the NT
From	Chris Ralston
Sent	30/05/2019 10:58:50 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Chris Ralston Adelaide River, Northern Territory, 0846, Australia

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Please reply to Chris Ralston at *********.

Ralston, Vincent – Tuesday, 28 May 2019 – 00:11:07

Subject	Objection to Origin's Kyalla frack site in the NT
From	Vincent Ralston
Sent	28/05/2019 12:11:07 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

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Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

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This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Vincent Ralston Batchelor, Northern Territory, 0845, Australia

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Please reply to Vincent Ralston at *********.

Ramadan, Carl - Thursday, 23 May 2019 - 19:10:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Carl Ramadan
Sent	23/05/2019 7:10:52 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Cari Ramadan South Brisbane, Queensland, 4101, Australia

This email was sent by Carl Ramadan via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Carl provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Carl Ramadan at *********.

Ramage, Peter - Wednesday, 29 May 2019 - 08:55:51

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Peter Ramage
Sent	29/05/2019 8:55:51 AM

A National disgrace! 250 years ago we committed a great crime against our First Nations people when our ancestors arrived from England and claimed Australia as their own. Let's not repeat this crime, this time by ruining their Country in the NT with fracking.

Peter Ramage ************* NSW 2518

Ramsay, Georgina - Friday, 24 May 2019 - 07:16:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Georgina Ramsay
Sent	24/05/2019 7:16:32 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

This email was sent by Georgina Ramsay via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Georgina provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Georgina Ramsay at *********.

Ramsay, Robyn – Thursday, 30 May 2019 – 07:48:50

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Robyn Ramsay
Sent	30/05/2019 7:48:50 AM

Fracking is a dangerous and disastrous practice for our country and climate. I am dismayed that the NT government will consider the Origin Energy plans for fracking in this state. Surely there is sufficient world- wide evidence against this mining technique. I urge your government not to proceed.

Ramsay, Rosemary – Wednesday, 29 May 2019 – 15:44:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rosemary Ramsay
Sent	29/05/2019 3:44:36 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Rosemary Ramsay

This email was sent by Rosemary Ramsay via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Rosemary provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Rosemary Ramsay at *********.

Ramsdale, Russell – Wednesday, 29 May 2019 – 12:59:07

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Russell Ramsdale
Sent	29/05/2019 12:59:07 PM

I am a 67yo retired Safety Advisor and I am begging you not to do this, experience through out the world shows it will end in tears.

You CANNOT get these toxic chemicals out of the ground once they are there, condemning the future generations to destruction, over the years they WILL leek out. I come from the generation of the Vietnam war where civil disobedience was use to help stop a massive injustice on our young people, as it turns out the correct thing to do, it breaks my heart to see men die now as a result of Agent Orange, and so I see this as even worse, and would support similar and hopefully more aggressive civil disobedience. Saying 40+ years later we should have known better will destroy you. "Those that don't read and recognise history are bound to repeat it" please "DONT DO THIS EVIL THING"

Post Code 3730

Russell Ramsdale *******

VIC 3730

Ramsden, Laurie - Friday, 24 May 2019 - 16:58:22

Subject	Objection to Origin's Kyalla frack site in the NT
From	Laurie Ramsden
Sent	24/05/2019 4:58:22 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Laurie Ramsden Bouddi, New South Wales, 2251, Australia

This email was sent by Laurie Ramsden via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Laurie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Laurie Ramsden at *********.

Rance, Phillip - Tuesday, 28 May 2019 - 18:44:03

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Phillip Rance
Sent	28/05/2019 6:44:03 PM

This project is a threat to our safe climate future.

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.1 The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.2 We simply cannot afford such a climate disaster.

The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well Many of these chemicals do not have available health data. These chemicals must be adequately health tested before being used in the fracking processes.

Phillip Rance ************* WA 6210

Rancic, Milica - Thursday, 30 May 2019 - 15:03:49

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Milica Rancic
Sent	30/05/2019 3:03:49 PM

This project is a a threat to vital ground water and hence is a threat to all life forms in not only NT buy to all life depending on the great Cartesian basin. I.e all of inland Australia

Milica Rancic ************* VIC 3121

Rand, Danielle - Friday, 24 May 2019 - 04:47:44

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Danielle Rand
Sent	24/05/2019 4:47:44 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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Yours sincerely, Danielle Rand Budgewoi, New South Wales, 2262, Australia

This email was sent by Danielle Rand via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Danielle provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Danielle Rand at *********.

Randall, Carol – Monday, 27 May 2019 – 06:03:00

Subject	Objection to Origin's Kyalla frack site in the NT
From	Carol Randall
Sent	27/05/2019 6:03:00 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

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This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Carol Randall

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Please reply to Carol Randall at *********.

Randell, Don - Saturday, 25 May 2019 - 08:36:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Don Randell
Sent	25/05/2019 8:36:10 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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Yours sincerely, Don Randell Bundaberg South, Queensland, 4670, Australia

This email was sent by Don Randell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Don provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Don Randell at *********.

Rankin, Joanne - Thursday, 23 May 2019 - 19:01:56

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Joanne Rankin
Sent	23/05/2019 7:01:56 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Joanne Rankin O'Connor, Australian Capital Territory, 2602, Australia

This email was sent by Joanne Rankin via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Joanne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Joanne Rankin at *********.

Rankin, Joanne - Friday, 24 May 2019 - 12:16:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Joanne Rankin
Sent	24/05/2019 12:16:13 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Joanne Rankin via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Joanne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Joanne Rankin at *********.

Rankin, Lachlan - Thursday, 30 May 2019 - 11:46:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lachlan Rankin
Sent	30/05/2019 11:46:12 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Lachlan Rankin Burra, New South Wales, 2620, Australia

This email was sent by Lachlan Rankin via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Lachlan provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Lachlan Rankin at *********.

Rankine, Kath – Saturday, 25 May 2019 – 17:07:15

Subject	Objection to Origin's Kyalla frack site in the NT
From	Kath Rankine
Sent	25/05/2019 5:07:15 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Kath Rankine Warriwillah, New South Wales, 2429, Australia

This email was sent by Kath Rankine via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Kath provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kath Rankine at *********.

Ransom, Cathy - Tuesday, 28 May 2019 - 20:24:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cathy Ransom
Sent	28/05/2019 8:24:16 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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Yours sincerely, Carhy Ransom Geilston Bay, Tasmania, 7015, Australia

This email was sent by Cathy Ransom via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Cathy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Cathy Ransom at *********.

Ransome, Frank – Wednesday, 29 May 2019 – 19:00:02

Subject	Objection to Origin's Kyalla frack site in the NT
From	Frank Ransome
Sent	29/05/2019 7:00:02 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

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WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

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Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Frank Ransome Emungalan, Northern Territory, 0850, Australia

This email was sent by Frank Ransome via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Frank provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Frank Ransome at *********.

Ransome, Stephanie – Wednesday, 29 May 2019 – 19:37:03

Subject	Objection to Origin's Kyalla frack site in the NT
From	Stephanie Ransome
Sent	29/05/2019 7:37:03 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Stephanie Ransome Emungalan, Northern Territory, 0850, Australia

This email was sent by Stephanie Ransome via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Stephanie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Stephanie Ransome at *********.

Rapmund, Ross - Tuesday, 28 May 2019 - 19:49:50

Subject	I oppose the Origin Kyalla frack site in the NT
From	Ross Rapmund
Sent	28/05/2019 7:49:50 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

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Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Ross Rapmund via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Ross provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ross Rapmund at *********.

Rapp, Katharina – Friday, 24 May 2019 – 11:21:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Katharina Rapp
Sent	24/05/2019 11:21:40 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Katharina Rapp Castlemaine, Victoria, 3450, Australia

This email was sent by Katharina Rapp via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Katharina provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Katharina Rapp at *********.

Rasmussen, Neil – Saturday, 25 May 2019 – 07:59:24

Subject	Objection to Origin's Kyalla frack site in the NT
From	Neil Rasmussen
Sent	25/05/2019 7:59:24 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Neil Rasmussen Freestone, Queensland, 4370, Australia

This email was sent by Neil Rasmussen via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Neil provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Neil Rasmussen at *********.

Rasmussen, Neil – Wednesday, 29 May 2019 – 07:59:17

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Neil Rasmussen
Sent	29/05/2019 7:59:17 AM

I would like to make a submission of protest that Origin Energy not proceed with their exploration. Fracking has a long history of being bad for the environment, polluting underground water systems and leaving poisonous pools of water on the surface. The burning of this fossil fuel will have a detrimental effect on our climate. Please do not allow Origin to proceed.

Rasmussen, Nicolas – Wednesday, 29 May 2019 – 14:16:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Nicolas Rasmussen
Sent	29/05/2019 2:16:16 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Nicolas Rasmussen Maroubra, New South Wales, 2035, Australia

This email was sent by Nicolas Rasmussen via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Nicolas provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Nicolas Rasmussen at *********.

Ratcliffe, Albert – Wednesday, 29 May 2019 – 01:32:26

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Albert Ratcliffe
Sent	29/05/2019 1:32:26 AM

Write your submission here - use our talking points to the left to guide your submission.

Albert Ratcliffe

WA 6107

Ratcliffe, Albert – Wednesday, 29 May 2019 – 02:02:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Albert Ratcliffe
Sent	29/05/2019 2:02:17 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

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WET SEASON RISKS WITH WASTE ON SITE

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Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Albert Ratcliffe Wilson, Western Australia, 6107, Australia

This email was sent by Albert Ratcliffe via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Albert provided an email address (********) which we included in the REPLY-TO field.

Please reply to Albert Ratcliffe at *********.

Rath, Margaret – Saturday, 25 May 2019 – 18:11:22

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Margaret Rath
Sent	25/05/2019 6:11:22 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, margaret rath

This email was sent by margaret rath via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however margaret provided an email address (**********) which we included in the REPLY-TO field.

Please reply to margaret rath at *********.

Rats, Angela – Tuesday, 28 May 2019 – 19:45:58

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Angela Rats
Sent	28/05/2019 7:45:58 PM

Write your submission here - use our talking points to the left to guide your submission.

Angela Rats ************ VIC 3065

Rattigan, Annabel - Friday, 24 May 2019 - 12:02:38

Subject	Objection to Origin's Kyalla frack site in the NT
From	Annabel Rattigan
Sent	24/05/2019 12:02:38 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

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It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns. Annabel Rattigan

This email was sent by Annabel Rattigan via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Annabel provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Annabel Rattigan at *********.

Raudon-Hill, Judith – Monday, 27 May 2019 – 05:46:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Judith Raudon-Hill
Sent	27/05/2019 5:46:02 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Judith Raudon-Hill Kerry, Queensland, 4285, Australia

This email was sent by Judith Raudon-Hill via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Judith provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Judith Raudon-Hill at *********.

Rauenbusch, Joey - Thursday, 23 May 2019 - 17:45:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Joey Rauenbusch
Sent	23/05/2019 5:45:49 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the Australian community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory, or for that matter ANYWHERE in Australia or the world. I strongly object to the approval of this particular EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water resources and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Joey Rauenbusch Cygnet, Tasmania, 7112, Australia

This email was sent by Joey Rauenbusch via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Joey provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Joey Rauenbusch at *********.

Rauenbusch, Joey – Wednesday, 29 May 2019 – 12:05:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Joey Rauenbusch
Sent	29/05/2019 12:05:04 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and the world. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country.
- 2. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond. We do not want to sell Australia off to the highest bidder. Allowing this kind of environmental destruction is criminal in my opinion and acts of this nature may well have to be accounted for in criminal courts in the future, when the effects of climate change due to excessive plundering for the sake of profit are more apparent.
- 3. Aboriginal communities and non-aboriginal Australian citizens have OVERWHELMINGLY opposed fracking on their land. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that The findings from the UTS report suggest REASONS FOR CONCERN regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high

pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

5. In addition to poisoning waterways and aquifers, there is evidence that fracking causes both earthquakes and sinkholes in the immediate vicinity of the works.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely,

Joey Rauenbusch Cygnet, Tasmania, 7112, Australia

This email was sent by Joey Rauenbusch via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Joey provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Joey Rauenbusch at *********.

Ravendran, Vikram – Wednesday, 29 May 2019 – 14:17:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Vikram Ravendran
Sent	29/05/2019 2:17:02 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Vikram Ravendran

This email was sent by Vikram Ravendran via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Vikram provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Vikram Ravendran at *********.

Ravenwolf, Josie – Wednesday, 29 May 2019 – 10:53:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Josie Ravenwolf
Sent	29/05/2019 10:53:30 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Josie Ravenwolf Mount Molloy, Queensland, 4871, Australia

This email was sent by Josie Ravenwolf via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Josie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Josie Ravenwolf at *********.

Rawlings, Anna – Sunday, 26 May 2019 – 21:15:14

Subject	Objection to Origin's Kyalla frack site in the NT
From	Anna Rawlings
Sent	26/05/2019 9:15:14 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

I care deeply about the environment and wish to stop fracking.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Anna Rawlings South West Rocks, New South Wales, 2431, Australia

This email was sent by Anna Rawlings via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Anna provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Anna Rawlings at *********.

Rawnsley, Michael - Tuesday, 28 May 2019 - 13:58:26

Subject	Objection to Origin's Kyalla frack site in the NT
From	Michael Rawnsley
Sent	28/05/2019 1:58:26 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Michael Rawnsley

This email was sent by Michael Rawnsley via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Michael provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Michael Rawnsley at *********.

Ray, Linda – Friday, 24 May 2019 – 14:40:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Linda Ray
Sent	24/05/2019 2:40:17 PM

Dear Onshore Gas division,

I am writing to express my complete objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns are outlined below, with regards to this plan with this plan are outlined below:

OPEN AIR WASTEWATER TANKS POSE HIGHLY UNACCEPTABLE RISK

The fact that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid is unacceptable for many reasons.

This drilling and flowback fluid is full of toxins including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, which includes the Gouldian Finch. These should not be open and accessible to any birdlife at any time.

WASTE ON SITE CARRY WET SEASON RISKS

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, as was recommended during the NT fracking inquiry 7.12. Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts, which have occurred before in cases similar.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be totally off limits to fracking.

FRACKING SUBSTANCES ARE TOXIC POISONS

The fracking chemicals Origin plans to use are harmful to health and the list of substances Origin want to use have known health impacts. An independent review of the substances has shown they are linked to: respiratory irritation, acute toxicity levels. burns, tissue damage, acute toxicity, respiratory irritation, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available or testing at all.

TOTAL FIRE BAN DAYS AND BUSHFIRE RISKS

Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days. This area is sensitive to bushfires.

TRANSPORT RISKS AND TOURISM IMPACTS

Although Origin says they care about cumulative impacts, theyhave failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

On top of all of the above, Origin want to dump the toxic waste on Queensland, by trucking waste to an undetermined site. Queensland already has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

Thank you for considering my concerns.

Yours sincerely, Linda Ray Baldivis, Western Australia, 6171, Australia

This email was sent by Linda Ray via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Linda provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Linda Ray at *********.

Ray, Linda – Thursday, 30 May 2019 – 14:15:42

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Linda Ray
Sent	30/05/2019 2:15:42 PM

Write your submission here - use our talking points to guide your submission.

Raymond, Ric – Thursday, 30 May 2019 – 06:37:02

Subject	I object to Origin Energy Being Given the Right to Start Fracking in the Northern
	Territory
From	Ric Raymond
Sent	30/05/2019 6:37:02 AM

Dear Sir/Madame,

I am an ordinary Australian dad who has two children, an older girl who recently finished Uni, and a 12 year old boy who has significant learning difficulties. Both of them will inherit the legacy of your decision regarding granting Origin Energy access to fracking in the Northern Territory.

I object to Origin Energy being allowed to frack in the Northern Territory.

Please, I urge you for the following reasons not to allow them to frack in the Northern Territory:

- Investment in fossil fuels has dropped by more than 75% around the world. BHP has volunteered that there is no future in coal and allied primary production.
- Why not use your administration to foster sustainable energy development, thereby creating work and employment for your communities.
- Chemicals that are harmful and even deleterious to human health and the environment are a fundamental part of the extraction process.
- These chemicals are exposed directly to the environment through "open" storage tanks, a process which the Northern Territory fracking inquiry prohibited.
- I urge to consult openly, honestly, and immediately with the first nation people and all concerned public communities to ascertain their wishes it is their will that you should follow; it is their land.

For the sake of your children and their children; for the sake of my own, and all parents who wish to bequeath an Earth in which they and all life may thrive, please do not permit Origin Energy to frack in the Northern Territory.

Sincerely,

Richard F Raymond 7 / 32 John St Redcliffe Qld 4020 ******** 409

Rayner, Gerard - Thursday, 23 May 2019 - 18:46:18

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gerard Rayner
Sent	23/05/2019 6:46:18 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Gerard Rayner Vermont, Victoria, 3133, Australia

This email was sent by Gerard Rayner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gerard provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Gerard Rayner at *********.

Rayner, Kirsty – Wednesday, 29 May 2019 – 07:01:24

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
-	and Hydraulic Fracturing 2019 Program EP117 N2
From	Kirsty Rayner
Sent	29/05/2019 7:01:24 AM

I strongly oppose the fracking process due to the devastating effects it has on precious groundwater. The effects of this process may be a cause of enormous destruction to the environment, not just now but in a very uncertain future where extreme weather events look sure to become the norm. There is no safe way to store dangerous chemicals in open ponds. I urge you to stop this dangerous project from proceeding.

Rayner, Robert - Wednesday, 29 May 2019 - 12:46:28

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Robert Rayner
Sent	29/05/2019 12:46:28 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Robert Rayner Kingswood, New South Wales, 2747, Australia

This email was sent by Robert Rayner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Robert provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Robert Rayner at *********.

Razzhigaeva, Nadia - Wednesday, 29 May 2019 - 11:15:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Nadia Razzhigaeva
Sent	29/05/2019 11:15:54 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Nadia Razzhigaeva Annerley, Queensland, 4103, Australia

This email was sent by Nadia Razzhigaeva via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Nadia provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Nadia Razzhigaeva at *********.

Rea, M – Friday, 24 May 2019 – 07:55:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	M Rea
Sent	24/05/2019 7:55:19 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

This email was sent by M Rea via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however M provided an email address (*********) which we included in the REPLY-TO field.

Please reply to M Rea at *********.

Read, Alexander

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Read, Alexander
Sent	N/A

See Next page

Arid Lands Environment Centre, Inc.



Office 90 Gap Rd, The Gap

PO Box 2796 Alice Springs

Mail NT 0871 Australia Phone +61 (08) 8952 2497 Fax +61 (08) 8953 2988 E-mail info@alec.org.au ABN 50 100 640 918

Kyalla Drilling and Hydraulic Fracturing (stimulation) Program EP 117 N2, EMP ALEC Submission

The Arid Lands Environment Centre (ALEC) is central Australia's peak environmental organisation that has been advocating for the protection of nature and ecologically sustainable development of the arid lands since 1980. ALEC is playing a key role in monitoring the development of an unconventional petroleum industry in the Northern Territory. We are actively working to ensure a robust, best practice regulatory framework is developed that properly implements all 135 recommendations from the Final Report from the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Final Report).

Regulatory reform to date has been largely consistent with what was required by the Final Report to reduce risk to an acceptable level. While ALEC maintains that there is no acceptable level of risk posed by the shale gas fracking industry, we submit that this EMP does not reduce environmental risk to a level that is acceptable under the proposed regulatory changes. This is because there are significant risks that are not properly mitigated in the plan. Central to this is the blatant breach of Recommendation 7.12 from the Scientific Inquiry which requires the use of enclosed tanks for the storage of wastewater. There are additional significant risks including risks to biodiversity, chemical control and spills and regulatory issues.

The EMP is fraught with inconsistency, uncertainty and unmitigated risk and should therefore be refused.

1. Wastewater management

The EMP is a clear beach of recommendation **7.12** from the Final Report from the Fracking Inquiry. This recommendation explicitly provides that: "enclosed tanks must be used to hold all wastewater". The EMP does not mandate the use of enclosed tanks to hold all wastewater instead allowing the use of open air 'tanks' and sumps. Evaporation has been identified as a preferred method of reducing water volumes. The use of open 'tanks' creates significant risks of environmental contamination.

BHP Billiton utilise closed tanks for the storage of produced water prior to storage, demonstrating that it is a perfectly viable method of storage. This also suggests the process of transferring water if a significant rainfall event is predicted is not industry best practice.

The EMP outlines inconsistent estimates for the volumes of wastewater produced and stored on site. Initial estimates suggest a range of 20-80% of fracturing water recovered as flowback leading to volumes ranging from 4-12ML. The figure of 5.7 ML held in storage over the wet season is therefore likely inaccurate. The EMP does not account for the need to develop infrastructure to accommodate the wide variability in potential waste water volumes.

¹ Scientific Inquiry into Hydraulic Fracturing, Final Report at page 246.

Nonetheless, wastewater is exposed to the environment for extended periods of time in an area that is liable to experience flooding. No contingency plans have been outlined to access the tanks and transfer wastewater in the event that access becomes impossible. The environmental risk of storing wastewater in open tanks over the wet season has not been evaluated by the proponent.

A significant rainfall event has been arbitrarily defined. The definition should be expanded to capture a broader range of possibilities and rainfall predictions. Notwithstanding the above, transferring wastewater during an extreme rainfall event will pose serious risks to workers and the environment from accidental contamination.

The use of open tanks is a blatant contravention of recommendation 7.12 which creates a serious risk of environmental contamination to waterways and wildlife. Considering that a recommendation from the Final Report has not been implemented, it is not possible for DENR to determine that the risk of the activity has been reduced to an acceptable level. Until this deficiency has been rectified, approval should be denied.

Finally, the EMP is not consistent with ESD as it does not comply with the Final Report or Industry Best Practice and leaves a significant environmental risk unmitigated, despite there being a practical precautionary solution available.

Recommendations

- Wastewater tracking information should be publicly available in real time, including consignment identification, destinations and volumes.
- Methane emissions from waste water tanks should be monitored.
- All wastewater should be stored in enclosed tanks all year round in accordance with recommendation 7.12.

2. Hazardous emissions

The EMP does not outline a monitoring program to identify emissions of volatile organic compounds (VOCs) or PAHs. These compounds pose the greatest health risk to workers and should be monitored through the same regime as methane.

The proponent anticipates the risk of methane emissions building pressure in wastewater tanks. This admission of methane from wastewater should therefore require the proponent to expand the methane monitoring program to include methane emissions from wastewater stored on site. This information should be included in total methane measurements for the activities on site.

Appendix L provides that a Reduced Emissions Completions should be implemented that can provide hydrocarbons or gas for sale. No hydrocarbons should be contained for sale during exploration activities, to do so would be to undertake production activity. The proponent should clarify whether they intend on selling hydrocarbons recovered during exploration.

Recommendation

- That the proponent includes a monitoring program for VOCs and PAHs
- That the proponent is required to monitor methane emissions from wastewater tanks.
- That any approval prohibits the sale of hydrocarbons recovered during exploration.

3. Chemical management

There are a multitude of chemicals listed in the EMP that do not have complete chemical risk assessments. Certain chemicals are only listed under their trade names. This is not an acceptable level of transparency. It is essential that all chemicals involved in the process are properly listed

by the technical scientific name and full chemical assessments are provided, as well as the most up to date health assessments. Chemicals should be prohibited from use in the fracturing program if there is no available data on potential health risks.

The spill management section determines there is a low risk flowing from potential exposure by assuming compliance with spill procedure and management. Further, the EMP should evaluate the risk of exposure to those chemicals in the event that non-compliance with appropriate procedure is unavoidable.

The EMP provides that a bridging Sill Prevention Management Plan will be developed to outline activities to be undertaken to comply with the code. This suggests that the proponent has not yet determined the formal process for complying with the code. Without certainty on how the proponent is able to comply with the code, the activity is both non-compliant with the code of practice and also introduces significant risk. The EMP should not be approved on the condition that the proponent is able to demonstrate compliance with the code following approval.

Recommendations

- Prohibit the use of chemicals that do not have completed human toxicity assessments.
- The proponent should amend the EMP to be compliant with the code of practice prior to any decision being made by DENR.
- Compliance procedure with the Code of Practice should be published and incorporated into the EMP.

4. Fracture operations

There are critical questions around how the fracturing occurs at depth. The EMP mentions that the process is controlled to determine optimal fracture propagation. This should include information about how fracture distances are monitored and controlled and the extent to which this can be accurately determined. This is crucial to understanding the level of risk of communication between fractures and aquifers. Before deciding arbitrary separation distances between fractures and aquifers, it is important to clarify the fracturing process and how that is controlled by the proponent.

It is anticipated that the wells will produce both gases and liquids, including long chain hydrocarbons. However, there is not little attention paid to monitoring and managing those liquids and other gaseous emissions. As the proponent acknowledges liquids are likely to be produced the EMP should have greater regard to the management issues and risks associated with longer chain hydrocarbons, including greenhouse potential and environmental toxicity.

The Final Report requires that a proponent of an EMP is to consult with affected landowners prior to the development of an EMP. There is insufficient evidence that this consultation as required has occurred. The proponent should outline the consultation that was undertaken prior to developing the EMP.

Recommendations

- Outline the process by which the proponent monitors the progression of fractures and how the fracture length is controlled.
- Complete a risk assessment of risks specific to liquids recovered during the fracturing process, including longer chain hydrocarbons.
- The proponent should outline the consultation that was undertaken prior to developing the EMP.

5. Birdlife

The use of open wastewater tanks poses a significant risk to the listed threatened bird species, including but not limited to the national listed Gouldian finch. The EMP has not assessed the risk to the bird from exposed waste water storage tanks and bunds. The critical question here is how the proponent intends to prevent these species coming into contact with wastewater. This information has not been provided by the proponent and the risk therefore remains unmitigated and unacceptable.

Any spillage of wastewater or otherwise contaminated water from the petroleum site is capable of entering the Lake Woods catchment. This lake is critical habitat for many species of nationally and internationally significant migratory birds and hosts significant biodiversity. Risks to the biodiversity of that catchment have not been adequately evaluated within the EMP and are therefore unmitigated.

Recommendation

- The EMP should be amended to include clear processes for preventing access for birdlife to wastewater
- All waste water storage tanks should be enclosed.
- Evaluate the downstream environmental contamination risks to Lake Woods from the accidental release of wastewater.

6. Regulation and approvals

This EMP includes multiple 'regulated' activities as defined under the *Petroleum (Environment) Regulations*. It is not clear how the proponent has decided which activities should be included for assessment and which activities have been separated out into separate EMPs. This was the same issue for the SANTOS EMP recently submitted. This inconsistency in the parameters of environmental assessment of petroleum exploration activities is creating a risky precedent that undermines the integrity of the assessment process.

It is important to note the legal complication in approving an EMP that intends to establish compliance with a guideline that has not yet commenced. The Petroleum Code of Practice has not been completed and is thus not a valid code under law. We therefore submit it is not legally appropriate for this EMP to be approved on the basis that it is unable to be compliant with an informal code.

The Fracking Final Report requires a proponent to assess the cumulative impacts of a proposal. This EMP does not constitute a cumulative risk assessment as it has not contemplated the impacts of future exploration and appraisal wells. Future wells can be reasonably anticipated to be necessary by the proponent and will occur on the same title if not adjacent titles. The proponent should therefore be required to comply with recommendation 14.21 and outline how the cumulative impacts of this activity are being assessed across the full scale of potential operations.

Recommendations

- Clarify the criteria that determine how many regulated activities a proponent is required to include in an EMP.
- Ensure that multiple regulated activities are included in future EMPs so that the public is informed about the cumulative impacts of the proposal.

Read, Rosemarie - Friday, 24 May 2019 - 10:39:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rosemarie Read
Sent	24/05/2019 10:39:13 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

I have a long and ongoing connection with communites in NT and have been following and discussing this matter with local people on my visits there. I am fully in support of the proposals as outlined below and believe they are entirely consistent with my discussions with elders and community members. Informed consent is paramount.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land.

The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml

[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Rosemarie Read Bentleigh, Victoria, 3204, Australia

This email was sent by Rosemarie Read via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Rosemarie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Rosemarie Read at *********.

Read, Steph – Thursday, 30 May 2019 – 13:59:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Steph Read
Sent	30/05/2019 1:59:30 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Steph Read

This email was sent by Steph Read via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however Steph provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Steph Read at *********.

Reade, Tricia - Friday, 24 May 2019 - 14:06:29

Subject	Objection to Origin's Kyalla frack site in the NT
From	Tricia Reade
Sent	24/05/2019 2:06:29 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Tricia Reade

This email was sent by Tricia Reade via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Tricia provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Tricia Reade at *********.

Reading, Jason - Friday, 24 May 2019 - 07:21:44

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jason Reading
Sent	24/05/2019 7:21:44 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Jason Reading Hampton East, Victoria, 3188, Australia

This email was sent by Jason Reading via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jason provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jason Reading at *********.

Reay, Peter – Thursday, 23 May 2019 – 18:05:27

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Peter Reay
Sent	23/05/2019 6:05:27 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I also ask you as Queensland ALP Government is considering the precautionary principles related to IPCC REPORT in levels of duty of care.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml

[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Peter Reay Bungalow, Queensland, 4870, Australia

This email was sent by Peter Reay via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Peter provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Peter Reay at *********.

Rebgetz, Paula – Wednesday, 29 May 2019 – 07:47:59

Subject	Objection to Origin's Kyalla frack site in the NT
From	Paula Rebgetz
Sent	29/05/2019 7:47:59 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Paula Rebgetz Gilles Plains, South Australia, 5086, Australia

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Please reply to Paula Rebgetz at *********.

Recchia, Francesco – Friday, 24 May 2019 – 07:36:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Francesco Recchia
Sent	24/05/2019 7:36:21 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Francesco Recchia Lenah Valley, Tasmania, 7008, Australia

This email was sent by Francesco Recchia via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Francesco provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Francesco Recchia at *********.

Redman, Peter - Friday, 24 May 2019 - 18:26:12

Subject	Objection to Origin's Kyalla frack site in the NT
From	Peter Redman
Sent	24/05/2019 6:26:12 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, peter redman Wistow, South Australia, 5251, Australia

This email was sent by peter redman via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however peter provided an email address (**********) which we included in the REPLY-TO field.

Please reply to peter redman at *********.

Redman, Richard – Saturday, 25 May 2019 – 10:39:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Richard Redman
Sent	25/05/2019 10:39:21 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Richard Redman Caringbah South, New South Wales, 2229, Australia

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Please reply to Richard Redman at *********.

Reed, Ethan - Thursday, 23 May 2019 - 21:23:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ethan Reed
Sent	23/05/2019 9:23:17 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Ethan Reed Dodges Ferry, Tasmania, 7173, Australia

This email was sent by Ethan Reed via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Ethan provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ethan Reed at *********.

Rees, Annie – Friday, 24 May 2019 – 11:29:45

Subject	Objection to Origin's Kyalla frack site in the NT
From	Annie Rees
Sent	24/05/2019 11:29:45 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory. The Northern Territory should remain Frack Free now and always.

My key concerns with this plan are outlined below.

1. WATER SECURITY

The safety of our water should not be jeapadised, we should not allow any industry to conduct activites that has any potential for harm. Some chemicals used by Origin are very toxic to aquatic life with long lasting effects.

2. FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts, I understand they are linked to acute toxicity, respiratory irritation and and cancer.

We have enough toxins in our environment and this is also to point 1.

3. OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid. Evaporation pits and open toxic tanks pose a risk to wildlife including birds.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

4. WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

5. FAILURE TO CONSULT & IMPACTS ON TOURISM

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

The Northern Territory should remain Frack Free and remain a pristine area and a tourism hot spot that supports many tourism jobs.

Indigenous communities and owners of the land have also not been consulted and are not being listened to, Fracking may destroy some of their cultural significant areas and sacred sites.

6. BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Annie Rees Nightcliff, Northern Territory, 0810, Australia

This email was sent by Annie Rees via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Annie provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Annie Rees at *********.

Rees, Bronwyn - Saturday, 25 May 2019 - 21:27:52

Subject	Objection to Origin's Kyalla frack site in the NT
From	Bronwyn Rees
Sent	25/05/2019 9:27:52 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Bronwyn Rees Burnley, Victoria, 3121, Australia

This email was sent by Bronwyn Rees via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Bronwyn provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Bronwyn Rees at *********.

Rees, Karen – Tuesday, 28 May 2019 – 21:54:23

Subject	Objection to Origin's Kyalla frack site in the NT
From	Karen Rees
Sent	28/05/2019 9:54:23 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Karen Rees Bangholme, Victoria, 3175, Australia

This email was sent by Karen Rees via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Karen provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Karen Rees at *********.

Rees-Hatton, Noelle – Wednesday, 29 May 2019 – 20:43:37

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Noelle Rees-Hatton
Sent	29/05/2019 8:43:37 PM

I object to this project and believe it should not go ahead, as it threatens our safe climate future. The fracking process uses dangerous chemicals that are a threat to human health, the natural environment and water. and these risks are accelerated by the use of open storage tanks.. I am concerned as to whether Traditional Owners have been able to provide free, prior and informed consent. to the fracking process.

Noelle Rees-Hatton ************* VIC 3184

REEVE, NICHOLAS - Friday, 24 May 2019 - 11:45:47

Subject	Objection to Origin's Kyalla frack site in the NT
From	NICHOLAS REEVE
Sent	24/05/2019 11:45:47 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concern with this plan are outlined below.

FRACKING SUBSTANCES are poisoning ing the Planet.

We cannot afford to send any more Greenhouse Gas Emissions into the atmosphere. The Carbon Budget is already used up.

Thank you for considering my concerns.

Yours sincerely, NICHOLAS REEVE New South Wales, 2460, Australia

This email was sent by NICHOLAS REEVE via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however NICHOLAS provided an email address (*********) which we included in the REPLY-TO field.

Please reply to NICHOLAS REEVE at **********.

Reeves, Helen - Friday, 24 May 2019 - 11:18:02

Subject	Objection to Origin's Kyalla frack site in the NT
From	Helen Reeves
Sent	24/05/2019 11:18:02 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Helen Reeves Thursday Island, Queensland, 4875, Australia

This email was sent by Helen Reeves via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Helen provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Helen Reeves at *********.

Reeves, Neil – Wednesday, 29 May 2019 – 11:18:41

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Neil Reeves
Sent	29/05/2019 11:18:41 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

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Please reply to Neil Reeves at *********.

Reeves, Pamela – Thursday, 30 May 2019 – 09:23:46

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Pamela Reeves
Sent	30/05/2019 9:23:46 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

I am writing to strongly object to Origin's request to drill an exploratory well for gas mining.

The reasons I object to the approval of the EMP are as follows:

- 1. Mining will lead to irreversible climate change. The science is telling us we can no longer continue to mine gas and other fossil fuels if we are to limit the world's temperature increase to 1.5 degrees so a project like this is highly irresponsible and unnecessary.
- 2. The Aboriginal communities will be severely impacted as a result of climate change if the mining should go ahead.
- 3. The wastewater is planned to be stored in open air tanks which is unacceptable and incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." If this waste water was to be released from the tanks during storms, it would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 4. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities.
- 5. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. Additional time, including a consultation period and process, must be allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.

4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

Yours sincerely, Pamela Reeves Gladesville, New South Wales, 2111, Australia

Please reply to Pamela Reeves at *********.

Reeves, Pamela – Thursday, 30 May 2019 – 09:28:38

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Pamela Reeves
Sent	30/05/2019 9:28:38 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

The Ryde Gladesville Climate Change Action Group is a group of over 600 citizens concerned about climate change and the need to stop fossil fuel mining and move rapidly to renewable energy.

W are, therefore, writing to strongly object to Origin's request to drill an exploratory well for gas mining.

The reasons we object to the approval of the EMP are as follows:

- 1. Mining will lead to irreversible climate change. The science is telling us we can no longer continue to mine gas and other fossil fuels if we are to limit the world's temperature increase to 1.5 degrees so a project like this is highly irresponsible and unnecessary.
- 2. The Aboriginal communities will be severely impacted as a result of climate change if the mining should go ahead.
- 3. The wastewater is planned to be stored in open air tanks which is unacceptable and incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." If this waste water was to be released from the tanks during storms, it would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 4. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities.
- 5. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of our recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.

- 3. Additional time, including a consultation period and process, must be allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

We write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

We wait with serious concern for your response to these matters.

Yours sincerely, Pamela Reeves Secretary, Ryde Gladesville Climate Change Action Group Gladesville, New South Wales, 2111, Australia

This email was sent by Pamela Reeves via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Pamela provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Pamela Reeves at *********.

Rego, Gareth - Wednesday, 29 May 2019 - 13:23:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gareth Rego
Sent	29/05/2019 1:23:00 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

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Below are a list of my recommendations:

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- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Gareth Rego Ivanhoe, Victoria, 3079, Australia

This email was sent by Gareth Rego via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gareth provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Gareth Rego at *********.

Reid, Alexander - Wednesday, 29 May 2019 - 08:57:34

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Alexander Reid
Sent	29/05/2019 8:57:34 AM

Please do not allow fracking to take place in the Northern Territory. Neither the country nor the world can accept the vast increase in carbon emissions that would occur if fracking goes ahead. Please, please do the right thing for Australia and the world in the face or climate change.

Alexander Reid ************ NSW 2450

Reid, Colin - Saturday, 25 May 2019 - 20:56:41

Subject	Objection to Origin's Kyalla frack site in the NT
From	Colin Reid
Sent	25/05/2019 8:56:41 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Colin Reid

This email was sent by Colin Reid via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Colin provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Colin Reid at *********.

Reid, Elizabeth - Friday, 24 May 2019 - 15:55:36

Subject	Objection to Origin's Kyalla frack site in the NT
From	Elizabeth Reid
Sent	24/05/2019 3:55:36 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Elizabeth Reid Williamstown, Victoria, 3016, Australia

This email was sent by Elizabeth Reid via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Elizabeth provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Elizabeth Reid at *********.

Reid, Greg – Thursday, 30 May 2019 – 04:28:55

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Greg Reid
Sent	30/05/2019 4:28:55 AM

Please note my objection to the use of fracking in the Northern Territory. I ask that the Northern Territory Government deny access to Origin Energy or any other company which would entail the use of fracking. I believe that this process is potentially dangerous to our climate. Greg Reid, Bauple Qld 4650

Reid, Joani - Wednesday, 29 May 2019 - 11:09:29

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Joani Reid
Sent	29/05/2019 11:09:29 AM

Simple. We all know fracking destroys the environment. No environment means no economy. And I will be shifting energy providers if you don't do what you know is best

joani reid ************** NSW 2537

Reid, John - Thursday, 30 May 2019 - 12:20:10

Subject	Objection to Origin's Kyalla frack site in the NT
From	John Reid
Sent	30/05/2019 12:20:10 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by John Reid via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however John provided an email address (**********) which we included in the REPLY-TO field.

Please reply to John Reid at *********.

Reid, Marianna - Friday, 24 May 2019 - 19:49:04

Subject	Objection to Origin's Kyalla frack site in the NT
From	Marianna Reid
Sent	24/05/2019 7:49:04 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by marianna reid via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however marianna provided an email address (*********) which we included in the REPLY-TO field.

Please reply to marianna reid at *********.



Subject	DENR - Consultation Form - 698409
From	
Sent	Tuesday, 28 May 2019 - 3:33 PM

See Next page

noreply@denr.nt.gov.au From: Sent: Tuesday, 28 May 2019 3:33 PM

WebAdmin DENR To:

DENR - Consultation Form - 698409 Subject:

Contact details

First name: Surname:

Email address:

Country: Australia Postcode: 0820

Phone number:

Community Stakeholder type:

Feedback

Activity you are

providing Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

feedback on:

Climate change Category type:

If other, please

specify::

Comments:

Privacy:

I appose fracking in the NT,I don't want the future of our environment contaminated and

damaged permanently and believe that the community should have a choice as to whether

it goes ahead or not. I don't want fracking in my area or anywhere in Australia there has

to be other alternatives available.

Attachments: No file uploaded

Tick this box if you wish for your name and contact details to be treated as confidential.

While the department will use their best endeavours to comply with your request, you

are advised that your complete submission may be disclosed in accordance with the

Information Act 2002 and if otherwise required by law.

Reid, Michael - Monday, 27 May 2019 - 08:15:53

Subject	I Object to Origin's Kyalla frack site in the NT
From	Michael Reid
Sent	27/05/2019 8:15:53 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, michael reid Taylor, Australian Capital Territory, 2913, Australia

This email was sent by michael reid via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however michael provided an email address (*********) which we included in the REPLY-TO field.

Please reply to michael reid at *********.

Reid, Peter – Wednesday, 29 May 2019 – 09:11:17

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Peter Reid
Sent	29/05/2019 9:11:17 AM

I object to this project and don't believe it should go ahead.

I live at Pambula Beach NSW, 2549.

This project is a threat to our safe climate future.

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.1 The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.2 We simply cannot afford such a climate disaster. The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.3 These chemicals must be adequately health tested before being used in the fracking processes. The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment. There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory stated that, 'Aboriginal people from regional communities who made submissions to the Panel almost universally expressed deep concern about, and strong opposition to, the development of any onshore shale gas industry on their country.'4 This included communities in the Beetaloo basin where this exploration well will be located. A report from the Jumbunna Institute at UTS, 5 has questioned whether communities have been provided adequate information about the fracking processes, leading to the conclusion that 'based on a review of publicly available information, the report finds that most – if not all – exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. In this context it is not appropriate to proceed with the current exploration permit without further consultation.

Peter Reid Pambula Beach NSW 2549

Reid, Selena – Friday, 24 May 2019 – 08:20:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Selena Reid
Sent	24/05/2019 8:20:05 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Selena Reid Cedar Vale, Queensland, 4285, Australia

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Please reply to Selena Reid at *********.

Reilly, Adam – Wednesday, 29 May 2019 – 11:39:19

Subject	Re: Response to Origin Energy's Environmental Management Plan (EMP)
From	Adam Reilly
Sent	29/05/2019 11:39:19 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning

chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Adam Reilly

Reservoir, Victoria, 3073, Australia

This email was sent by Adam Reilly via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Adam provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Adam Reilly at *********.

Reilly, Duncan - Thursday, 23 May 2019 - 17:34:06

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Duncan Reilly
Sent	23/05/2019 5:34:06 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
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4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

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- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Duncan Reilly Reynella, South Australia, 5161, Australia

This email was sent by Duncan Reilly via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Duncan provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Duncan Reilly at *********.

Reilly, Lesley - Tuesday, 28 May 2019 - 14:17:57

Subject	Objection to Origin's Kyalla frack site in the NT
From	Lesley Reilly
Sent	28/05/2019 2:17:57 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

Water security should be paramount in the Northern Territory, one of the most arid areas of the continent. Aside from fracking being an unsafe process, and hazardous to the environment and biological life, it uses huge amounts of fresh water. Just as Territory residents pay for their water usage, so should mining industries be paying for use of our most precious resource.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

It has been reported by pastoralist interstate that not only will cattle refuse to drink the contaminated water pooling on the ground near drilling sites, but also that the gases arising there are flammable.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Several European countries have decided to ban or limit fracking due to health and environments concerns. We should do the same, and ensure the highest regulatory standards for all gas exploration activities in the NT.

Thank you for considering my concerns.

This email was sent by Lesley Reilly via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Lesley provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Lesley Reilly at *********.

Reinke, Josh – Monday, 27 May 2019 – 13:23:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Josh Reinke
Sent	27/05/2019 1:23:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Josh Reinke

This email was sent by Josh Reinke via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Josh provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Josh Reinke at *********.

Reis, Edward – Thursday, 30 May 2019 – 12:43:39

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Edward Reis
Sent	30/05/2019 12:43:39 PM

This project is a threat to our safe climate future.

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.1 The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.2 We simply cannot afford such a climate disaster.

The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.3 These chemicals must be adequately health tested before being used in the fracking processes.

The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment.4

There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory stated that, 'Aboriginal people from regional communities who made submissions to the Panel almost universally expressed deep concern about, and strong opposition to, the development of any onshore shale gas industry on their country.'4 This included communities in the Beetaloo basin where this exploration well will be located. A report from the Jumbunna Institute at UTS, 5 has questioned whether communities have been provided adequate information about the fracking processes, leading to the conclusion that 'based on a review of publicly available information, the report finds that most – if not all – exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. In this context it is not appropriate to proceed with the current exploration permit without further consultation.

References:

- [1] 'Onshore shale gas in Australia and the Northern Territory', The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [2] 'NT gas compared to coal-fired power plants', The Australia Institute.
- [3] For more information on chemical information see 'Object to Origin's frack plans', Lock the Gate.

- [4] Recommendation 7.12, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [4] 'Aboriginal people and their culture', p 266, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [5] Hydraulic Fracturing and Free, Prior and Informed Consent in the NT, Jumbunna Institute UTS.

Make a submission

Edward Reis

Renaud, Michael – Wednesday, 29 May 2019 – 18:29:01

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Michael Renaud
Sent	29/05/2019 6:29:01 PM

There is sufficient renewable energy sources (wind. solar, water) to power Australia into the distant future with a minimal carbon footprint and creating thousands of jobs as well.

Fracking simply DESTROYS the environment and the future of Australian's on the land, for ONE purpose.... GREED.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.3 These chemicals must be adequately health tested before being used in the fracking processes.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment.

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.1 The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.2

We simply cannot afford such a climate disaster.

Michael Renaud ************ VIC 3030

Rendell, Karen - Thursday, 23 May 2019 - 21:56:28

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Karen Rendell
Sent	23/05/2019 9:56:28 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Karen Rendell Elwood, Victoria, 3184, Australia

This email was sent by Karen Rendell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Karen provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Karen Rendell at *********.

Rendell, Kim – Friday, 24 May 2019 – 07:43:50

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP) m Was
From	Kim Rendell
Sent	24/05/2019 7:43:50 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As an Australian citizen I am deeply concerned about the risks associated with drilling and hydraulic fracturing in the Northern Territory. This process is far too risky and it is short sighted, disrespectful and simply wrong to seek such sources of energy when there are so many other alternatives.

Origin Energy needs to rethink its business model.

Mining exploration laws are immoral. I believe one day we will look back in disbelief and sorrow.

I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the

Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286

- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Kim Rendell Helensburgh, New South Wales, 2508, Australia

This email was sent by Kim Rendell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Kim provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kim Rendell at *********.

Renew, Tim – Wednesday, 29 May 2019 – 14:59:01

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tim Renew
Sent	29/05/2019 2:59:01 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Tim Renew Camp Mountain, Queensland, 4520, Australia

This email was sent by Tim Renew via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Tim provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Tim Renew at *********.

Renfree, Yvonne – Wednesday, 29 May 2019 – 11:29:56

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Yvonne Renfree
Sent	29/05/2019 11:29:56 AM

Dear Sir/Madam,

I object strongly to Origin fracking in the Northern Territory. I outline briefly my objections below.

The health and environmental risk of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks. This goes against the Northern Territory's own recommendations.

The fracking process uses dangerous chemicals that represent a threat to human health, the natural environment and water sources. Has Origin tested the health effects of these.

There are serious concerns as to whether the Traditional owners have been able to provide free, prior and informed consent to the fracking process.

We cannot afford such a climate disaster that frackin will do wothout putting in place rigid safety measures.

Renner, Anica – Wednesday, 29 May 2019 – 15:04:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Anica Renner
Sent	29/05/2019 3:04:04 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Anica Renner Ashburton, Victoria, 3147, Australia

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Please reply to Anica Renner at *********.

Renton, Merv - Thursday, 23 May 2019 - 23:00:02

Subject	I Object to Origin Energy's Environmental Management Plan (EMP)
From	Merv Renton
Sent	23/05/2019 11:00:02 PM

To whom it may concern: Department of Environment and Natural Resources (DENR),

I Object to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I believe that the Department of Environment and Natural Resources should completely reject Origin Energy's EMP to protect the land, water, health and welfare of impacted communities as well as a Global shared future from climate change.

As a member of the wider community, I am very concerned about the risks of Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I do object to the approval of this EMP for the following reasons:

1. Approval of this EMP will lead to severe and irreversible climate change effects for people of the Northern Territory and the World. The Northern Territory is already affected by the impact of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [See 1]. Remote Aboriginal communities across the NT will feel this first and worst: with extreme heat waves, water shortages and even more extreme flooding, which could force many Aboriginal people to move off their country.

Approving this EMP, one of nine exploration wells, would effectively make the Beetaloo Basin as open to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [See 2]. This would pose a serious climate change threat to communities across the NT and beyond - we don't need that!.

2. Proposed storage of waste water in open air tanks poses great risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [See 3]

Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [See 4]. So this means that there can be big unseasonal storms, so having open tanks with fracking waste water (at any time of the year) would put drinking water, wildlife and people's health at risk, including communities up and downstream.

3. Origin Energy have not appropriately consulted with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [See 5]. Plus, the Inquiry found that Aboriginal communities strongly opposed fracking on their land. The findings from the UTS report are reasons for concerns with all of Origin Energy's

consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. Use of dangerous chemicals poses massive risks to the environment, water and community health and are worsened by the use of open storage tanks. There are some really nasty chemicals that Origin Energy plans to use in wells and to store on-site over the dry and wet seasons. The chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as returned fluid.

These reasons make it clear to me that any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead at all!.

Below are a list of best recommendations:

- 1. DENR needs to take a precautionary approach to the cumulative climate impacts of this exploration well, bearing in mind the risk that the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate at a time when we really need to rapidly decarbonise the global economy and energy supply system.
- 2. Waste water should be held in enclosed tanks at all times.
- 3. Additional time, including a consultation period / process, is set aside for Traditional Owners, Aboriginal communities and appropriate cultural authorities in the areas impacted by this EMP to consider this information and be given a proper chance to ask questions and respond.
- 4. All chemicals involved should be adequately health tested before being used in any fracking processes. Companies must be made to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify all oil and gas wells in which the chemicals are used.

I am in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are rightly concerned about the potential damages that fracking could cause to water, to country, to song lines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml

[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Merv Renton

This email was sent by Merv Renton via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Merv provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Merv Renton at *********.

Renton, Robert – Wednesday, 29 May 2019 – 13:44:39

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Robert Renton
Sent	29/05/2019 1:44:39 PM

My objection is based on the work of GetUp in researching this topic. I quote their main points as follows.

"Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.1 The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.2 We simply cannot afford such a climate disaster. The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.3 These chemicals must be adequately health tested before being used in the fracking processes. The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment. There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory stated that, 'Aboriginal people from regional communities who made submissions to the Panel almost universally expressed deep concern about, and strong opposition to, the development of any onshore shale gas industry on their country.'4 This included communities in the Beetaloo basin where this exploration well will be located. A report from the Jumbunna Institute at UTS, 5 has questioned whether communities have been provided adequate information about the fracking processes, leading to the conclusion that 'based on a review of publicly available information, the report finds that most – if not all – exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. In this context it is not appropriate to proceed with the current exploration permit without further consultation. References:

- [1] 'Onshore shale gas in Australia and the Northern Territory', The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [2] 'NT gas compared to coal-fired power plants', The Australia Institute.
- [3] For more information on chemical information see 'Object to Origin's frack plans', Lock the Gate.
- [4] Recommendation 7.12, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [4] 'Aboriginal people and their culture', p 266, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [5] Hydraulic Fracturing and Free, Prior and Informed Consent in the NT, Jumbunna Institute UTS."

Robert Renton ************* VIC 3029

Respondek, Denise – Thursday, 23 May 2019 – 19:55:56

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Denise Respondek
Sent	23/05/2019 7:55:56 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Do we in Australia have to firstly observe the terrible consequences of fracking and then insist on repeating the same mistake? Really we must begin to act with the best interest of the country and all its inhabitants, especially those who will be directly impacted. The almighty dollar is not worth what we will lose individually and collectively if we continue to worship at the Alta of the dollar. Please look at the environmental impact all across the United States, do not make the same mistake!

Yours sincerely, Denise Respondek Point Cook, Victoria, 3030, Australia

This email was sent by Denise Respondek via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Denise provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Denise Respondek at *********.

Reuter, Emily – Wednesday, 29 May 2019 – 07:39:04

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Emily Reuter
Sent	29/05/2019 7:39:04 AM

Origen Emery's plat to open Australia's first shoal fracking in the NT is fraught with danger, open waist ponds are not sufficient. If Adani and it's dangerous practices are allowed to damage Australian land then take the profits home, who else will?

Revington, John – Wednesday, 29 May 2019 – 11:01:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	John Revington
Sent	29/05/2019 11:01:49 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, John Revington

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Please reply to John Revington at *********.

Rewbridge, Linda - Wednesday, 29 May 2019 - 20:37:01

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Linda Rewbridge
Sent	29/05/2019 8:37:01 PM

Please don't let Origin carry out fracking in Northern Territory. Our God-given natural resources are far too precious for us to steward badly for our grandchildren and their future.

Linda Rewbridge

VIC 3936

Rewell, Gayle - Saturday, 25 May 2019 - 19:57:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gayle Rewell
Sent	25/05/2019 7:57:59 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Gayle Rewell

This email was sent by Gayle Rewell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gayle provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Gayle Rewell at *********.

Reynolds, Elle – Wednesday, 29 May 2019 – 17:05:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elle Reynolds
Sent	29/05/2019 5:05:21 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Elle Reynolds Mooloolaba, Queensland, 4557, Australia

This email was sent by Elle Reynolds via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Elle provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Elle Reynolds at *********.

Reynolds, Glenis – Thursday, 30 May 2019 – 00:54:57

Subject	Objection to Origin's Kyalla frack site in the NT
From	Glenis Reynolds
Sent	30/05/2019 12:54:57 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Glenis Reynolds Eighty Mile Beach, Western Australia, 6725, Australia

This email was sent by Glenis Reynolds via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Glenis provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Glenis Reynolds at *********.

Reynolds, Helen – Thursday, 23 May 2019 – 17:51:16

Subject	Re: Objection to Environmental Management Plan of Origin Energy (EMP)
From	Helen Reynolds
Sent	23/05/2019 5:51:16 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Although I am substantially copying this pre written submission, I am doing that because it says all the things I want to say and feel passionately about, so....Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental

Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Helen Reynolds Rozelle, New South Wales, 2039, Australia

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Please reply to Helen Reynolds at *********.

Reynolds, Lily – Wednesday, 29 May 2019 – 11:04:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lily Reynolds
Sent	29/05/2019 11:04:43 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Lily Reynolds Bronte, New South Wales, 2024, Australia

This email was sent by Lily Reynolds via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Lily provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Lily Reynolds at *********.

Reynolds, Mat - Friday, 24 May 2019 - 13:05:45

Subject	Objection to Origin's Kyalla frack site in the NT
From	Mat Reynolds
Sent	24/05/2019 1:05:45 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Mat Reynolds New South Wales, 2370, Australia

Please reply to Mat Reynolds at *********7.

Reynolds, Melisse - Thursday, 23 May 2019 - 17:40:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Melisse Reynolds
Sent	23/05/2019 5:40:21 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
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Yours sincerely, Melisse Reynolds Bellingen, New South Wales, 2454, Australia

This email was sent by Melisse Reynolds via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Melisse provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Melisse Reynolds at *********.

Reynolds, Melisse – Wednesday, 29 May 2019 – 19:09:56

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Melisse Reynolds
Sent	29/05/2019 7:09:56 PM

Write your submission here - use our talking points to guide your submission.

Melisse Reynolds *********** NSW 2454

Reynolds, Paul – Monday, 27 May 2019 – 12:57:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Paul Reynolds
Sent	27/05/2019 12:57:30 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, paul reynolds Girards Hill, New South Wales, 2480, Australia

This email was sent by paul reynolds via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however paul provided an email address (**********) which we included in the REPLY-TO field.

Please reply to paul reynolds at *********.

Reynolds, Valerie – Wednesday, 29 May 2019 – 12:47:06

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Valerie Reynolds
Sent	29/05/2019 12:47:06 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

Yours faithfully

Valerie Reynolds

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml

[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

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Please reply to Valerie Reynolds at *********.

Rhoades, Victoria – Wednesday, 29 May 2019 – 07:13:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Victoria Rhoades
Sent	29/05/2019 7:13:13 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Victoria Rhoades Tuckombil, New South Wales, 2477, Australia

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Please reply to Victoria Rhoades at *********.

Ri, Ka – Wednesday, 29 May 2019 – 17:40:02

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Ka Ri
Sent	29/05/2019 5:40:02 PM

I object to this project and don't believe it should go ahead. I live in Queensland and have traveled throughout this beautiful country.

I have also seen the outcomes of fracking. It has the potential to do long lasting and irreversible damage to this county, to communities and to Australia's future.

This project is a threat to our safe climate future.

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.

The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.

We simply cannot afford such a climate disaster. The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources. Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.

These chemicals must be adequately health tested before being used in the fracking processes. The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment.

There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory stated that, 'Aboriginal people from regional communities who made submissions to the Panel almost universally expressed deep concern about, and strong opposition to, the development of any onshore shale gas industry on their country.'4 This included communities in the Beetaloo basin where this exploration well will be located. A report from the Jumbunna Institute at UTS, 5 has questioned whether communities have been provided adequate information about the fracking processes, leading to the conclusion that 'based on a review of publicly available information, the report finds that most – if not all – exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. In this context it is not appropriate to proceed with the current exploration permit without further consultation.

References:

- [1] 'Onshore shale gas in Australia and the Northern Territory', The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [2] 'NT gas compared to coal-fired power plants', The Australia Institute.

- [3] For more information on chemical information see 'Object to Origin's frack plans', Lock the Gate.
- [4] Recommendation 7.12, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [4] 'Aboriginal people and their culture', p 266, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [5] Hydraulic Fracturing and Free, Prior and Informed Consent in the NT, Jumbunna Institute UTS.rite your submission here use our talking points to guide your submission.

I beg Origin to find clean, renewable and sustainable solutions for energy. Yours sincerely, Kari resident of Queensland.

Rice, Wendy – Friday, 24 May 2019 – 06:07:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Wendy Rice
Sent	24/05/2019 6:07:17 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Wendy Rice

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Please reply to Wendy Rice at *********.

Rich, Anne – Saturday, 25 May 2019 – 18:18:02

Subject	Objection to Origin's Kyalla frack site in the NT
From	Anne Rich
Sent	25/05/2019 6:18:02 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Anne Rich Brogers Creek, New South Wales, 2535, Australia

This email was sent by Anne Rich via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however Anne provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Anne Rich at *********.

Rich, Bob – Thursday, 23 May 2019 – 18:32:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bob Rich
Sent	23/05/2019 6:32:45 PM

Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

We are in the 6th extinction event of earth. When we unravel the web of life, we also fall through the hole.

Climate change is a big part of this. It is essential for survival to keep fossil carbon in the ground, everywhere on Earth, and this includes avoiding fracking in the NT.

Previously, I have made a submission to the Senate for its investigation of Australian fauna, and what I wrote there is relevant.

http://bobswriting.com/mudsmith/extinctions.pdf

Sincerely, Bob Rich, PhD Healesville, Victoria, 3777, Australia

This email was sent by Bob Rich via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Bob provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Bob Rich at **********.

Rich, Elliat - Thursday, 30 May 2019 - 16:06:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elliat Rich
Sent	30/05/2019 4:06:31 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue. A healthy democracy require that all levels of government listen to their communities and represent us.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters. Our groundwater is an irreplaceable asset, it should be protected at all costs. I respect that fracking is an opportunity for revenue but this is the moment in history when other values need to be prioritised, for now and far into the future.

Yours sincerely, Elliat Rich East Side, Northern Territory, 0870, Australia

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286

- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

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Please reply to Elliat Rich at *********.

Rich, Ruth - Friday, 24 May 2019 - 08:30:18

Subject	Plea to Origin Energy's Environmental Management Plan (EMP)
From	Ruth Rich
Sent	24/05/2019 8:30:18 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Plea to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
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Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Ruth Rich Byron Bay, New South Wales, 2481, Australia

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Please reply to Ruth Rich at *********.

Richards, Gillian - Thursday, 23 May 2019 - 17:50:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gillian Richards
Sent	23/05/2019 5:50:11 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Gillian Richards Hope Island, Queensland, 4212, Australia

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Please reply to Gillian Richards at *********.

Richards, Helen - Tuesday, 28 May 2019 - 18:59:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Richards
Sent	28/05/2019 6:59:14 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

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Yours sincerely, Helen Richards Semaphore Park, South Australia, 5019, Australia

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Please reply to Helen Richards at *********.

Richards, Peter – Wednesday, 29 May 2019 – 19:06:19

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Peter Richards
Sent	29/05/2019 7:06:19 PM

Dear Sir / Madam,

A large coal mine is being organised in Queensland, which is being fast tracked and is not safe for the environment and there is a high chance that it will pollute the underground and above ground water ways and make large land areas unusable in the near and midterm future and the mine does not have the approval of the native Australians that have title of the area planed for this coal mine. And now you wish to do the same thing in the Northern Territory but with Fracking? well sham on you!

Yes these projects will create hundreds if not thousand of jobs, but at what cost to Australia and it's environment, water ways, the native vegetation and wildlife? And what will happen to the title holders of the land? And worst still, what will become of the future Australians? They will be our descendants / grandchildren / great grandchildren etc. What kind of Australia will be left for them? One with no drinking water? Or no wildlife? Or no vegetation and air that can only be breathed through masks? This would be the sham of our generation if we allow this to happen! We must listen to the experts / scientists and make the best decisions and have the highest standards in place if these projects go ahead and have the authority to stop the projects if any of the conditions are broken! Plus a very high penalty, not the normal few grand and a gentle slap on the back of the hand! The penalty must be high enough for the companies involved to really take notice and do the right thing for Australia as a whole!

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.1 The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.2 We simply cannot afford such a climate disaster. The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.3 These chemicals must be adequately health tested before being used in the fracking processes. The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment. There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory stated that, 'Aboriginal people from regional communities who made submissions to the Panel almost universally expressed deep concern about, and strong opposition to, the development of any onshore shale gas industry on their country.'4 This included communities in the Beetaloo basin where this exploration well will be located. A report from the Jumbunna Institute at UTS, 5 has questioned whether communities have been provided adequate information about

the fracking processes, leading to the conclusion that 'based on a review of publicly available information, the report finds that most - if not all - exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. In this context it is not appropriate to proceed with the current exploration permit without further consultation.

Richards, Stephanie – Tuesday, 28 May 2019 – 20:50:30

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Stephanie Richards
Sent	28/05/2019 8:50:30 PM

ORIGIN: PLEASE Don't Frack the NT

Stephanie Richards

SA 5252

Richards, Trudy - Friday, 24 May 2019 - 13:17:53

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Trudy Richards
Sent	24/05/2019 1:17:53 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

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- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Trudy Richards Healesville, Victoria, 3777, Australia

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Please reply to Trudy Richards at *********.

Richardson, Brian – Wednesday, 29 May 2019 – 13:04:20

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Brian Richardson
Sent	29/05/2019 1:04:20 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Brian Richardson

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Please reply to Brian Richardson at *********.

Richardson, Maria – Wednesday, 29 May 2019 – 17:33:57

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Maria Richardson
Sent	29/05/2019 5:33:57 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Maria Richardson Nambour, Queensland, 4560, Australia

This email was sent by Maria Richardson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Maria provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Maria Richardson at *********.

Richardson, Peter – Friday, 24 May 2019 – 14:03:39

Subject	Objection to Origin's Kyalla frack site in the NT
From	Peter Richardson
Sent	24/05/2019 2:03:39 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

Along with the concerns raised below, the effects of fracking has been known to 'fracture' much further than the initial site, leading to underground gasses affecting surrounding waterways. This effect continues well after the fracking has stopped, and is likely to cause permanent ongoing poisoning to fish and birdlife.

Other key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Peter Richardson

This email was sent by Peter Richardson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Peter provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Peter Richardson at *********.

Richardson, Robert – Wednesday, 29 May 2019 – 13:08:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Robert Richardson
Sent	29/05/2019 1:08:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Robert Richardson Curl Curl, New South Wales, 2096, Australia

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Please reply to Robert Richardson at *********.

Richardson, Ronan - Friday, 24 May 2019 - 13:31:28

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ronan Richardson
Sent	24/05/2019 1:31:28 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Ronan Richardson Mayfield, New South Wales, 2304, Australia

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Please reply to Ronan Richardson at *********.

Richardson, Slade - Thursday, 30 May 2019 - 00:29:01

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Slade Richardson
Sent	30/05/2019 12:29:01 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Yours sincerely, Slade Richardson Macclesfield, South Australia, 5153, Australia

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Please reply to Slade Richardson at *********.

RICHARDSON, Susan – Wednesday, 29 May 2019 – 10:56:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Susan RICHARDSON
Sent	29/05/2019 10:56:29 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Susan RICHARDSON

This email was sent by Susan RICHARDSON via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Susan provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Susan RICHARDSON at *********.

Richardson, Z – Wednesday, 29 May 2019 – 11:03:58

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Z Richardson
Sent	29/05/2019 11:03:58 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

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Yours sincerely, Z Richardson Hall, Australian Capital Territory, 2618, Australia

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Please reply to Z Richardson at *********.

Richet, Tracey - Thursday, 30 May 2019 - 12:59:52

Subject	No! To franking in the NT
From	Tracey Richet
Sent	30/05/2019 12:59:52 PM

I Tracey Richey, object to franking in the NT my post code is 3994. This will have a devastating affect on the climate and the community. The fracking process use's dangerous chemicals that threaten Human health, environment and water sources. If such a project goes ahead the carbon emissions would equal 50 new coal fired power stations. Please think about our plant and future say NO! To franking.

Richmond, Alex - Monday, 27 May 2019 - 13:01:43

Subject	Origin's Kyalla frack site in the NT- concerns
From	Alex Richmond
Sent	27/05/2019 1:01:43 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Alex Richmond, Wagait Beach, Northern Territory, 0822, Australia

This email was sent by Alex Richmond via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Alex provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Alex Richmond at *********.

Rickarby, Malcolm – Wednesday, 29 May 2019 – 12:36:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Malcolm Rickarby
Sent	29/05/2019 12:36:12 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Malcolm Rickarby Lilydale, Victoria, 3140, Australia

This email was sent by Malcolm Rickarby via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Malcolm provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Malcolm Rickarby at *********.

Rickard, Sarah - Thursday, 30 May 2019 - 11:10:31

Subject	Origin Energy's EMP for the Kyalla Program EP117 N2 - Objection
From	Sarah Rickard
Sent	30/05/2019 11:10:31 AM

I object to the proposal from Origin to explore for gas and demand the NT Government not approve their environmental management plan due to the risks and consequences of such a program.

It is time for Government to take a stand on fossil fuel projects and make the required transition to renewable energy.

Australia's commitment to the rest of the world and to our own inhabitants - both human and non-human - is to cut our Carbon emissions and end any support of fossil fuel use to other countries.

Sincerely,

Sarah Rickard

VIC 3071

Rickson, Kara – Thursday, 30 May 2019 – 13:50:09

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kara Rickson
Sent	30/05/2019 1:50:09 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

I submit to the Department of Environment and Natural Resources that outright rejection of Origin Energy's EMP is the only viable and acceptable path towards protecting the land, water, health and wellbeing of impacted communities near the proposed project site and beyond from the potentially catastrophic impacts of climate change.

I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory, and the side-lining of Traditional Owners and Aboriginal communities during these processes. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Kara Rickson Robertson, Queensland, 4109, Australia

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Please reply to Kara Rickson at *********.

Ridd, G. - Wednesday, 29 May 2019 - 13:26:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	G. A. Ridd
Sent	29/05/2019 1:26:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

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- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, G. A. Ridd Bardon, Queensland, 4065, Australia

This email was sent by G. A. Ridd via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however G. A. provided an email address (**********) which we included in the REPLY-TO field.

Please reply to G. A. Ridd at *********.

Ridden, Lynette – Friday, 24 May 2019 – 17:05:30

Subject	Objection to Origin's Kyalla frack site in the NT
From	Lynette Ridden
Sent	24/05/2019 5:05:30 PM

Dear Onshore Gas division.

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Lynette Ridden Kearns, New South Wales, 2558, Australia

This email was sent by Lynette Ridden via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Lynette provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Lynette Ridden at *********.

Ridge, Angela – Wednesday, 29 May 2019 – 11:31:27

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Angela Ridge
Sent	29/05/2019 11:31:27 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, angela ridge Wattle Park, South Australia, 5066, Australia

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Please reply to angela ridge at *********.

Ridgeway, Tahlia - Sunday, 26 May 2019 - 20:31:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tahlia Ridgeway
Sent	26/05/2019 8:31:37 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Below are a list of my recommendations:

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Tahlia Ridgeway

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Please reply to Tahlia Ridgeway at *********.

Ridout, Sarah – Wednesday, 29 May 2019 – 10:40:27

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sarah Ridout
Sent	29/05/2019 10:40:27 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Sarah Ridout

This email was sent by Sarah Ridout via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Sarah provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Sarah Ridout at *********.

Ridsdale, Kelli - Friday, 24 May 2019 - 09:00:01

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kelli Ridsdale
Sent	24/05/2019 9:00:01 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Kelli Ridsdale

This email was sent by Kelli Ridsdale via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however Kelli provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Kelli Ridsdale at *********.

Riedl, Regina – Friday, 24 May 2019 – 10:18:20

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Regina Eberle Riedl
Sent	24/05/2019 10:18:20 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, regina eberle riedl Umina Beach, New South Wales, 2257, Australia

This email was sent by regina eberle riedl via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however regina provided an email address (**********) which we included in the REPLY-TO field.

Please reply to regina eberle riedl at *********.

Riek, Josephine – Wednesday, 29 May 2019 – 12:59:56

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Josephine Riek
Sent	29/05/2019 12:59:56 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Josephine Riek Dutton Park, Queensland, 4102, Australia

This email was sent by Josephine Riek via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Josephine provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Josephine Riek at *********.

Rieschieck, Karen – Wednesday, 29 May 2019 – 06:58:28

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Karen Rieschieck
Sent	29/05/2019 6:58:28 AM

Fracking should not be the way we create our energy sources for the future. We need better long term vision.

Rigazzu, Siena – Wednesday, 29 May 2019 – 21:20:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Siena Rigazzu
Sent	29/05/2019 9:20:59 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Siena Rigazzu Coburg, Victoria, 3058, Australia

This email was sent by Siena Rigazzu via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Siena provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Siena Rigazzu at *********.

Rigby, Bec - Monday, 27 May 2019 - 12:52:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bec Rigby
Sent	27/05/2019 12:52:36 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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I wait with serious concern for your response to these matters.

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Yours sincerely, Bec Rigby Saint Kilda West, Victoria, 3182, Australia

This email was sent by Bec Rigby via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Bec provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Bec Rigby at *********.

Rigby, John – Sunday, 26 May 2019 – 00:33:01

Subject	Objection to Origin's Kyalla frack site in the NT
From	John Rigby
Sent	26/05/2019 12:33:01 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, john rigby Bathurst, New South Wales, 2795, Australia

This email was sent by john rigby via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however john provided an email address (**********) which we included in the REPLY-TO field.

Please reply to john rigby at *********.

Rigby, John – Wednesday, 29 May 2019 – 18:56:53

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	John Rigby
Sent	29/05/2019 6:56:53 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, john rigby

This email was sent by john rigby via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however john provided an email address (**********) which we included in the REPLY-TO field.

Please reply to john rigby at *********.

Rigg, Billy - Thursday, 23 May 2019 - 18:37:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Billy Rigg
Sent	23/05/2019 6:37:32 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Billy Rigg Mount Hawthorn, Western Australia, 6016, Australia

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Please reply to Billy Rigg at *********.

Rigg, Wayne - Tuesday, 28 May 2019 - 20:51:36

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Wayne Rigg
Sent	28/05/2019 8:51:36 PM

If this exploration well finds gas, or worse oil and gas, it could mean the start of Australia's first land-based shale oil and gas field, where every well would need to be fracked. It would be a climate disaster, destroying country and water.

Righele, Mark – Friday, 24 May 2019 – 13:02:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Mark Righele
Sent	24/05/2019 1:02:13 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Mark Righele

This email was sent by Mark Righele via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Mark provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Mark Righele at *********.

Riha-Jones, Daniel – Tuesday, 28 May 2019 – 19:24:24

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Daniel Riha-Jones
Sent	28/05/2019 7:24:24 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Kylie Riha-Jones Carnegie, Victoria, 3163, Australia

This email was sent by Daniel Riha-Jones via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Daniel provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Daniel Riha-Jones at *********.

Riha-Jones, Kylie – Thursday, 23 May 2019 – 19:00:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kylie Riha-Jones
Sent	23/05/2019 7:00:26 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Kylie Riha-Jones Carnegie, Victoria, 3163, Australia

This email was sent by Kylie Riha-Jones via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Kylie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Kylie Riha-Jones at *********.

Riles, Nicky – Tuesday, 28 May 2019 – 20:24:00

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Nicky Riles
Sent	28/05/2019 8:24:00 PM

Dear Origin, I am writing to beg and plead with you as a responsible corporate participant in our society to please honour indigenous history and lands, by acting in an absolute and uncompromised manner to protect the water, landscape and air of the home of ancient civilisations.

Please invest in renewables. I'm a pensioner and have done this by putting solar on my roof even though it will take quite a few years to recoup my costs.

The new Federal government does not understand the magnamity of the task of looking after our country and its peoples and the planet. Please help us fight for our environment, our society and our world.

Do not mine or frack the precious NT. Yours sincerely, Nicky Riles 0407152135

Riley, Alan – Friday, 24 May 2019 – 23:36:07

Subject	Objection to Origin's Kyalla frack site in the NT
From	Alan Riley
Sent	24/05/2019 11:36:07 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON AND DESTROY OUR NATIVE AND INDIGENOUS LAND.

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Alan Riley Moorebank, New South Wales, 2170, Australia

This email was sent by Alan Riley via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however Alan provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Alan Riley at *********.

Riley, Helen – Monday, 27 May 2019 – 18:10:09

Subject	Objection to Origin's Kyalla frack site in the NT
From	Helen Riley
Sent	27/05/2019 6:10:09 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

Fracking causes irreversible damage and poisions the environment. It destroys water tables. My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Helen Riley Mt Burrell , New South Wales, 2480, Australia

This email was sent by Helen Riley via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Helen provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Helen Riley at *********.

Rimes, Fiona – Tuesday, 28 May 2019 – 20:03:07

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Fiona Rimes
Sent	28/05/2019 8:03:07 PM

Fracking is dangerous and should not be approved especially in this area in the Northern Territory. Dangerous chemicals are used and these pollute water supplies.

The Aboriginal communities in this area are opposed to fracking and the mining of oil or gas in this area.

Please dont allow Origin to poison our Country. No price is worth it.

Fiona Rimes ********

NSW 2204

Ringrose, Joy – Wednesday, 29 May 2019 – 14:07:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Joy Ringrose
Sent	29/05/2019 2:07:21 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

We are the guardians of the land for future generations. Our food and water security is gravely threatened by this pernicious industry. 6% of fracking wells leak initially, and ALL of them leak over time, putting toxic and carcinogenic chemicals into the surrounding aquifers.

CSG mining is irresponsible, ecological vandalism. For the sake of all of our futures please do not go ahead with this development.

Yours Sincerely, Joy Ringrose

This email was sent by Joy Ringrose via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Joy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Joy Ringrose at *********.

Ripani, Mara - Thursday, 23 May 2019 - 18:58:24

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Mara Ripani
Sent	23/05/2019 6:58:24 PM

I beg you no to frack. Please invest in renewables of all kinds. But not fracking. No please no.

Yours sincerely, mara ripani

This email was sent by mara ripani via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however mara provided an email address (**********) which we included in the REPLY-TO field.

Please reply to mara ripani at *********.

Rippe, Melinda – Friday, 24 May 2019 – 11:40:20

Subject	Objection to Origin's Kyalla frack site in the NT
From	Melinda Rippe
Sent	24/05/2019 11:40:20 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Melinda Rippe

This email was sent by Melinda Rippe via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Melinda provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Melinda Rippe at *********.

Rippon, Brett - Friday, 24 May 2019 - 11:55:21

Subject	Objection to Fracking the NT
From	Brett Rippon
Sent	24/05/2019 11:55:21 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Brett Rippon Broulee, New South Wales, 2537, Australia

This email was sent by Brett Rippon via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Brett provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Brett Rippon at *********.

Risk, Glen - Tuesday, 28 May 2019 - 00:17:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Glen Risk
Sent	28/05/2019 12:17:13 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

As a child in school the concept of "Fracking" was introduced to us as a possible technology of the future.

It was entirely obvious that such a technology would be seriously damaging.

Yet you did it?

Fracking perfectly represents the insane greed of a suicidal ethos.

Such techniques could never be made safe.

Thank you for considering my concerns.

This email was sent by Glen Risk via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however Glen provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Glen Risk at *********.

Rissinich-Samson, Susan – Wednesday, 29 May 2019 – 11:04:43

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Susan Rissinich-Samson
Sent	29/05/2019 11:04:43 AM

Fracking hasn't ben proved to be safe for people and their environment. Traditional Owners have always had a real understanding of their land, much more than other Australians. Rather than continuing to be arrogant with our "civilized" assumptions, which have previously been proved wrong on many occasions, I stand with the Traditional Owners and call for all fracking to stop! Please look at more environmentally sound ways to produce energy for Australians and know that the truth always comes out in the end, so damage that happens to people and environment will one day mean large law suites which your company and the Government will have to pay. Please stop this stupid course of action before it starts.

Susan Rissinich-Samson

VIC 3340

Ritchie, Casey – Wednesday, 29 May 2019 – 14:56:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Casey Ritchie
Sent	29/05/2019 2:56:10 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Casey Ritchie Bairnsdale, Victoria, 3875, Australia

This email was sent by Casey Ritchie via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Casey provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Casey Ritchie at *********.

Rittberger, Brenton – Tuesday, 28 May 2019 – 20:05:32

Subject	I Object to Origin Energy's Environmental Management Plan for the Kyalla Drilling and
	Hydraulic Fracturing 2019 Program EP117 N2
From	Brenton Rittberger
Sent	28/05/2019 8:05:32 PM

I am opposed to Fracking. Because . It clears the land of flora and fauna. Fracking injects toxic chemicals into the earth I have requested the MSDS not heard a word. I want you to publish the Material Safety Data Sheet (MSDS) for Fracking Chemicals (all of them, from each site). Fracking then contaminates ground water and as if that wasn't enough the liquid tailing muck is impounded as a waiting pollutant to surface water. All Fracking bores leak gas or pollutants , inter aquifer, surface streams or atmosphere. If you were going to design a system to stuff the planet Fracking is it. This process has also disempowered traditional owners yet again.

Brenton rittberger ********

VIC 3550

Rizzeri, Francesca – Wednesday, 29 May 2019 – 11:02:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Francesca Rizzeri
Sent	29/05/2019 11:02:19 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Francesca Rizzeri Wembley, Western Australia, 6014, Australia

This email was sent by Francesca Rizzeri via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Francesca provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Francesca Rizzeri at *********.

Roadley, Michelle - Saturday, 25 May 2019 - 09:57:24

Subject	Objection to Origin's Kyalla frack site in the NT
From	Michelle Roadley
Sent	25/05/2019 9:57:24 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Michelle Roadley Aspley, Queensland, 4034, Australia

This email was sent by Michelle Roadley via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Michelle provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Michelle Roadley at *********.

Roadley, Michelle – Saturday, 25 May 2019 – 10:49:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Michelle Roadley
Sent	25/05/2019 10:49:05 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Michelle Roadley Aspley, Queensland, 4034, Australia

This email was sent by Michelle Roadley via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Michelle provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Michelle Roadley at *********.

Roadley, Michelle - Tuesday, 28 May 2019 - 19:41:23

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Michelle Roadley
Sent	28/05/2019 7:41:23 PM

Write your submission here - use our talking points to the left to guide your submission.

Robarts, Annice – Wednesday, 29 May 2019 – 19:32:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Annice Robarts
Sent	29/05/2019 7:32:42 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Annice Robarts Balwyn North, Victoria, 3104, Australia

This email was sent by Annice Robarts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Annice provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Annice Robarts at *********.

Robbins, Christopher – Wednesday, 29 May 2019 – 14:07:55

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Christopher Robbins
Sent	29/05/2019 2:07:55 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Christopher Robbins

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Please reply to Christopher Robbins at *********.

Robenn, Waynne - Friday, 24 May 2019 - 17:03:26

Subject	Objection to Origin's Kyalla frack site in the NT
From	Waynne Robenn
Sent	24/05/2019 5:03:26 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Wynne Robenn Seddon West, Victoria, 3011, Australia

This email was sent by Waynne Robenn via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Waynne provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Waynne Robenn at *********.

Roberts, Emma – Saturday, 25 May 2019 – 18:01:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Emma Roberts
Sent	25/05/2019 6:01:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Emma Roberts Wulagi, Northern Territory, 0812, Australia

This email was sent by Emma Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Emma provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Emma Roberts at *********.

Roberts, Gareth – Tuesday, 28 May 2019 – 13:35:33

Subject	Objection to Origin's Kyalla frack site in the NT
From	Gareth Roberts
Sent	28/05/2019 1:35:33 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Gareth Roberts Moulden, Northern Territory, 0830, Australia

This email was sent by Gareth Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gareth provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Gareth Roberts at *********.

Roberts, James – Saturday, 25 May 2019 – 21:51:01

Subject	Objection to Origin's Kyalla frack site in the NT
From	James Roberts
Sent	25/05/2019 9:51:01 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

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Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

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This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, James Roberts Kallaroo, Western Australia, 6025, Australia

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Please reply to James Roberts at *********.

Roberts, Jan – Wednesday, 29 May 2019 – 19:34:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jan Roberts
Sent	29/05/2019 7:34:59 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Yours sincerely, Jan Roberts Brucedale, New South Wales, 2650, Australia

This email was sent by Jan Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jan provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jan Roberts at *********.

Roberts, Jessica – Thursday, 30 May 2019 – 09:59:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jessica Roberts
Sent	30/05/2019 9:59:05 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jessica Roberts

This email was sent by Jessica Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jessica provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jessica Roberts at *********.

Roberts, Julie - Thursday, 23 May 2019 - 19:35:24

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Julie Roberts
Sent	23/05/2019 7:35:24 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Not worth the risk
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4].
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks, and there are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Julie Roberts

This email was sent by Julie Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Julie provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Julie Roberts at **********.

Roberts, Lawry - Tuesday, 28 May 2019 - 22:11:28

Subject	Fracking in the N.T.?Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Lawry Roberts
Sent	28/05/2019 10:11:28 PM

You must be joking and how much do you stand to gain from this endeavor. your submission here - use our talking points to the left to guide your submission.

Lawry Roberts ************* NSW 2100

Roberts, Lindsay - Wednesday, 29 May 2019 - 08:06:51

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Lindsay Roberts
Sent	29/05/2019 8:06:51 AM

It is dangerous and inexcusable to store water which is contaminated in open tasks. If there is an extreme weather event thewater can them be released into the environment.

Lindsay Roberts

VIC 3108

Roberts, Mark - Friday, 24 May 2019 - 12:38:01

Subject	Objection to Origin's Kyalla frack site in the NT and other Australian capital cities plus
	Tasmania.we should looking at solar power.
From	Mark Roberts
Sent	24/05/2019 12:38:01 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Mark Roberts Coolalinga, Northern Territory, 0839, Australia

This email was sent by Mark Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Mark provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Mark Roberts at *********.

Roberts, Michelle – Monday, 27 May 2019 – 09:31:05

Subject	Objection to Origin's Kyalla frack site in the NT
From	Michelle Roberts
Sent	27/05/2019 9:31:05 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Michelle Roberts New South Wales, 2850, Australia

This email was sent by Michelle Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Michelle provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Michelle Roberts at *********.

Roberts, Molly – Wednesday, 29 May 2019 – 19:26:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Molly Jeans Roberts
Sent	29/05/2019 7:26:54 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Molly Jeans Roberts

This email was sent by Molly Jeans Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Molly provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Molly Jeans Roberts at *********.

Roberts, Shani – Saturday, 25 May 2019 – 14:18:00

Subject	Objection to Origin's Kyalla frack site in the NT
From	Shani Roberts
Sent	25/05/2019 2:18:00 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Shani Roberts Casuarina, Western Australia, 6167, Australia

This email was sent by Shani Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Shani provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Shani Roberts at *********.

Roberts, Tamara – Sunday, 26 May 2019 – 19:35:41

Subject	Objection to Origin's Kyalla frack site in the NT
From	Tamara Roberts
Sent	26/05/2019 7:35:41 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Tamara Roberts Clay Wells, South Australia, 5280, Australia

This email was sent by Tamara Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Tamara provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Tamara Roberts at *********.

Roberts, Tracy - Friday, 24 May 2019 - 17:31:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tracy Roberts
Sent	24/05/2019 5:31:21 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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Yours sincerely, Tracy Roberts Portland, Victoria, 3305, Australia

This email was sent by Tracy Roberts via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Tracy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Tracy Roberts at *********.

Robertson, Annette – Wednesday, 29 May 2019 – 20:21:34

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Annette Robertson
Sent	29/05/2019 8:21:34 PM

Fracking could ruin the environment, the land, the people and the air that we breathe. Look to renewables for Australia's energy needs, please.

Robertson, Brigid – Tuesday, 28 May 2019 – 20:26:40

Subject	Objection to Origin's Kyalla frack site in the NT
From	Brigid Robertson
Sent	28/05/2019 8:26:40 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Brigid Robertson Manton, Northern Territory, 0837, Australia

This email was sent by Brigid Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Brigid provided an email address (********) which we included in the REPLY-TO field.

Please reply to Brigid Robertson at *********.

Robertson, Geraldine - Friday, 24 May 2019 - 12:19:24

Subject	Objection to Origin's Kyalla frack site in the NT
From	Geraldine Robertson
Sent	24/05/2019 12:19:24 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Geraldine Robertson Clifton Hill, Victoria, 3068, Australia

This email was sent by Geraldine Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Geraldine provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Geraldine Robertson at *********.

Robertson, Glenne – Wednesday, 29 May 2019 – 17:11:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Glenne Robertson
Sent	29/05/2019 5:11:19 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Glenne Robertson Junee, New South Wales, 2663, Australia

This email was sent by Glenne Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Glenne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Glenne Robertson at *********.

Robertson, Jane - Friday, 24 May 2019 - 09:48:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jane Robertson
Sent	24/05/2019 9:48:19 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jane Robertson Nairne, South Australia, 5252, Australia

This email was sent by Jane Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jane provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jane Robertson at *********.

Robertson, Lynne - Thursday, 30 May 2019 - 11:03:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lynne Robertson
Sent	30/05/2019 11:03:54 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

Yours sincerely Lynne Robertson

This email was sent by Lynne Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Lynne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Lynne Robertson at *********.

Robertson, Margaret – Friday, 24 May 2019 – 19:26:37

Subject	Objections to Origin's Kyalla frack site in the NT
From	Margaret Robertson
Sent	24/05/2019 7:26:37 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

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It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

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Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Margaret Robertson Bulli, New South Wales, 2516, Australia

This email was sent by Margaret Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Margaret provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Margaret Robertson at *********.

Robertson, Peter – Thursday, 23 May 2019 – 17:35:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Peter Robertson
Sent	23/05/2019 5:35:34 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Peter Robertson Inverell, New South Wales, 2360, Australia

This email was sent by Peter Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Peter provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Peter Robertson at *********.

Robertson, Peter – Wednesday, 29 May 2019 – 14:14:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Peter Robertson
Sent	29/05/2019 2:14:30 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I am a former resident of the NT and grew to love the natural environment and people of the Territory.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental

Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml

[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Peter Robertson Potts Point, New South Wales, 2011, Australia

This email was sent by Peter Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Peter provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Peter Robertson at *********.

Robertson, Roger - Friday, 24 May 2019 - 11:15:20

Subject	Objection to Origin's Kyalla frack site in the NT
From	Roger Robertson
Sent	24/05/2019 11:15:20 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Roger Robertson Glen Mervyn, Western Australia, 6239, Australia

This email was sent by Roger Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Roger provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Roger Robertson at *********.

Robertson, Sarah – Thursday, 30 May 2019 – 21:21:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sarah Robertson
Sent	30/05/2019 9:21:11 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

I hope, in considering my submission and the fate of those who would be impacted by this project should it go ahead, you will make a decision that is thoroughly researched, one that considers future generations and the fate of our country, which in global terms currently has the highest rate of species going extinct. I request a response justifying why this project should proceed in the context of the current climate emergency. I ask that you explain how you would mitigate the impacts this project would have on the local communities that have not consented to fracking on their land.

Thank you for hearing me out and for the opportunity to make this submission. I write it to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the

absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286

- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Sarah Robertson The Junction, New South Wales, 2291, Australia

This email was sent by Sarah Robertson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Sarah provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Sarah Robertson at *********.

Roberts-Smyth, Elijah – Wednesday, 29 May 2019 – 12:26:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elijah Roberts-Smyth
Sent	29/05/2019 12:26:25 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Elijah Roberts-Smyth Orange, New South Wales, 2800, Australia

This email was sent by Elijah Roberts-Smyth via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Elijah provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Elijah Roberts-Smyth at *********.

Robeson, Jordan – Wednesday, 29 May 2019 – 14:53:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jordan Robeson
Sent	29/05/2019 2:53:42 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jordan Robeson Pennington, South Australia, 5013, Australia

This email was sent by Jordan Robeson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Jordan provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jordan Robeson at *********.

Robins, Crystal – Tuesday, 28 May 2019 – 09:41:50

Subject	Objection to Origin's Kyalla frack site in the NT
From	Crystal Robins
Sent	28/05/2019 9:41:50 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Crystal Robins Nightcliff, Northern Territory, 0810, Australia

This email was sent by Crystal Robins via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Crystal provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Crystal Robins at *********.

Robins, Daniel - Monday, 27 May 2019 - 09:51:16

Subject	Objection to Origin's Kyalla frack site in the NT
From	Daniel Robins
Sent	27/05/2019 9:51:16 AM

Dear Onshore Gas division,

As a Territorians who cares about the future of this land I want to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

While I have seen first hand the damage fracking can do to environment and communities the major concerns I personally have with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Daniel Robins Nightcliff, Northern Territory, 0810, Australia

This email was sent by Daniel Robins via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Daniel provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Daniel Robins at *********.

Robinson, Amy - Monday, 27 May 2019 - 21:29:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Amy Robinson
Sent	27/05/2019 9:29:59 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP.

Fracking has significant effects on the environment. It is also opposed by the traditional owners of the land.

We need to protect all unspoiled ecosystems remaining for the future. For the next generation.

Yours sincerely, Amy Robinson Port Macquarie, New South Wales, 2444, Australia

This email was sent by Amy Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Amy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Amy Robinson at *********.

Robinson, Coral – Thursday, 30 May 2019 – 16:17:26

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Coral Robinson
Sent	30/05/2019 4:17:26 PM

The following is my submission relating to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2.

I object to the proposed Program for the following reasons:

1. THREAT TO OUR CLIMATE

This project is a threat to our safe climate future.

Origin's exploration well has the potential to lead to hundreds of Origin's shale gas wells in full production phase, and to the further development of Northern Territory's unconventional gas industry, which NT government sources have said could mean over 6000 gas wells.[1]

The gas industries' peak body, the Australian Petroleum Production and Exploration Association, has said there are over 200 trillion cubic feet of gas in the Northern Territory, which is the equivalent to 50 power stations operating for thirty years.[2] We simply cannot afford such a climate disaster.

2. THREAT TO HUMAN HEALTH, THE NATURAL ENVIRONMENT AND WATER SOURCES

The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well. Many of these chemicals do not have available health data.[3] These chemicals must be adequately health tested before being used in the fracking processes.

The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment.[4]

3. CONSENT BY TRADITIONAL OWNERS

There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory stated that, 'Aboriginal people from regional communities who made submissions to the Panel almost universally expressed deep concern about, and strong opposition to, the development of any onshore shale gas industry on their country. ['4] This included communities in the Beetaloo basin where this exploration well will be located.

A report from the Jumbunna Institute at UTS, [5] has questioned whether communities have been provided adequate information about the fracking processes, leading to the conclusion that 'based on a review of publicly available information, the report finds that most – if not all – exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. In this context it is not appropriate to proceed with the current exploration permit without further consultation.

I therefore strongly urge you not to approve Origin Energy's Environmental Management Plan for their drilling well.

Yours sincerely Coral Robinson Kirribilli NSW 2061

References:

- [1] 'Onshore shale gas in Australia and the Northern Territory', The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [2] 'NT gas compared to coal-fired power plants', The Australia Institute.
- [3] For more information on chemical information see 'Object to Origin's frack plans', Lock the Gate.
- [4] Recommendation 7.12, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [4] 'Aboriginal people and their culture', p 266, The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, March 2018.
- [5] Hydraulic Fracturing and Free, Prior and Informed Consent in the NT, Jumbunna Institute UTS.

Coral Robinson ********

NSW 2061

Robinson, Greg – Monday, 27 May 2019 – 09:16:08

Subject	Objection to Origin's Kyalla frack site in the NT
From	Greg Robinson
Sent	27/05/2019 9:16:08 AM

Dear Onshore Gas division,

Risking the future of our water is not acceptable.

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Greg Robinson Minto Heights, New South Wales, 2566, Australia

This email was sent by Greg Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Greg provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Greg Robinson at *********.

Robinson, Jannette – Friday, 24 May 2019 – 06:05:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jannette Robinson
Sent	24/05/2019 6:05:40 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jannette Robinson Ballan, Victoria, 3342, Australia

This email was sent by Jannette Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Jannette provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jannette Robinson at *********.

Robinson, Jenny – Thursday, 30 May 2019 – 10:29:39

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jenny Robinson
Sent	30/05/2019 10:29:39 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jenny Robinson Victoria Park, Western Australia, 6100, Australia

This email was sent by Jenny Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Jenny provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jenny Robinson at *********.

Robinson, Kathe – Saturday, 25 May 2019 – 15:37:27

Subject	Objection to Origin's Kyalla frack site in the NT
From	Kathe Robinson
Sent	25/05/2019 3:37:27 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

Once again the familiar disasters will occur given the excessive demand being made on global resources, already badly out of balance. The belief that this planet is a cut- and -come -again pudding which has an infinite capacity to be exploited is mindless and the result will be too serious to contemplate.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

The accelerating effects of global warming will be cumulative and probably become unmanageable unless human desires and needs are not modified.

We all need to accept responsibility, however, for this to happen.

Please consider the likely consequences of Origins actions in its relations with company profits and its shareholders against the necessary health of the human—environment relation.

Yours sincerely, Kathe Robinson Guerilla Bay New South Wales, 2536, Australia

This email was sent by Kathe Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Kathe provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kathe Robinson at *********.

Robinson, Mary - Thursday, 30 May 2019 - 09:13:48

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Mary Robinson
Sent	30/05/2019 9:13:48 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue. I believe that real community consultation should be carried out to get the opinions of the people locally affected by any proposed mine operations and if the local community is majority not happy with the proposal then it should be rejected outright. There is no need to cause upset in communities that aren't yours for resources. It's just not ethical. Not to mention the impact on the local environment, ecology, plants and animals. Please don't let this company buy it's way into operations in this area against the will of the people. Find out what resources communities want to exploit and work with them with full transparency and consultation. Understand that people don't want some big company coming in and "shitting in their bath water" for benifits they'll never see, unlike a bath groundwater can't be drained and cleaned and refilled. The well-being of people should come first and that includes the rig ht to a healthy environment. Please respect the wishes of the local community and the feedback that is being provided to you right now. Please consider the following.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.

- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

[1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf

- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Mary Robinson Bairnsdale, Victoria, 3875, Australia

This email was sent by Mary Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Mary provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Mary Robinson at *********.

Robinson, Pauline – Wednesday, 29 May 2019 – 12:33:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Pauline Robinson
Sent	29/05/2019 12:33:11 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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Yours sincerely, Pauline Robinson Southport, Queensland, 4215, Australia

This email was sent by Pauline Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Pauline provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Pauline Robinson at *********.

Robinson, Rebecca – Thursday, 30 May 2019 – 21:13:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rebecca Robinson
Sent	30/05/2019 9:13:37 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Rebecca Robinson Albany Creek, Queensland, 4035, Australia

This email was sent by Rebecca Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Rebecca provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Rebecca Robinson at *********.

Robinson, Richard – Thursday, 23 May 2019 – 19:54:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Richard Robinson
Sent	23/05/2019 7:54:15 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

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Yours sincerely, Richard Robinson Para Vista, South Australia, 5093, Australia

This email was sent by Richard Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Richard provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Richard Robinson at *********.

Robinson, Toby - Monday, 27 May 2019 - 19:45:43

Subject	Objection to Origin's Kyalla frack site in the NT
From	Toby Robinson
Sent	27/05/2019 7:45:43 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Toby Robinson Baskerville, Western Australia, 6056, Australia

This email was sent by Toby Robinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Toby provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Toby Robinson at *********.

Robison, Sandra – Wednesday, 29 May 2019 – 12:44:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sandra Robison
Sent	29/05/2019 12:44:31 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, sandra Robison Forster, New South Wales, 2428, Australia

This email was sent by sandra Robison via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however sandra provided an email address (*********) which we included in the REPLY-TO field.

Please reply to sandra Robison at *********.

Robson, Dallas - Saturday, 25 May 2019 - 15:55:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Dallas Robson
Sent	25/05/2019 3:55:59 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Dallas Robson Coombabah, Queensland, 4216, Australia

This email was sent by Dallas Robson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Dallas provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Dallas Robson at *********.

Robson, Kate – Wednesday, 29 May 2019 – 18:37:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kate Robson
Sent	29/05/2019 6:37:19 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Kate Robson Erowal Bay, New South Wales, 2540, Australia

This email was sent by Kate Robson via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Kate provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kate Robson at *********.

Rocha, Cristina – Wednesday, 29 May 2019 – 12:15:53

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cristina Rocha
Sent	29/05/2019 12:15:53 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Cristina Rocha

This email was sent by Cristina Rocha via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Cristina provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Cristina Rocha at *********.

Roche, Colleen - Sunday, 26 May 2019 - 10:21:53

	I object to the fracking when known carcinogens are deliberately utilised and water, soil and birdlife are at risk
From	Colleen Roche
Sent	26/05/2019 10:21:53 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Colleen Roche Lawson, New South Wales, 2783, Australia

This email was sent by Colleen Roche via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Colleen provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Colleen Roche at *********.

Roche, Colleen - Tuesday, 28 May 2019 - 19:50:57

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Colleen Roche
Sent	28/05/2019 7:50:57 PM

How can we exploit our natural resources? It's the tipping point for climate change and we don't want it.Loss of clean water and resources is irreversible.

Colleen Roche ************* NSW 2783

Rochford, Helen - Thursday, 30 May 2019 - 15:29:16

Subject	Objection to Origin's Kyalla frack site in the NT
From	Helen Rochford
Sent	30/05/2019 3:29:16 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

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Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

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Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Helen Rochford Flagstaff Hill, South Australia, 5159, Australia

This email was sent by Helen Rochford via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Helen provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Helen Rochford at *********.

Rockendorfer, Theresa – Saturday, 25 May 2019 – 14:06:10

Subject	Objection to Origin's Kyalla frack site in the NT
From	Theresa Rockendorfer
Sent	25/05/2019 2:06:10 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Theresa Rockendorfer Lilyfield, New South Wales, 2040, Australia

This email was sent by Theresa Rockendorfer via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Theresa provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Theresa Rockendorfer at *********.

Rodal, Anita – Monday, 27 May 2019 – 01:57:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Anita Rodal
Sent	27/05/2019 1:57:10 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Anita Rodal

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Please reply to Anita Rodal at *********.

Rodda, Elisabeth - Sunday, 26 May 2019 - 06:54:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elisabeth Rodda
Sent	26/05/2019 6:54:04 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Elisabeth Rodda St Kilda, Victoria, 3182, Australia

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Please reply to Elisabeth Rodda at *********.

Roden, Janet - Sunday, 26 May 2019 - 20:56:11

Subject	Objection to Origin's Kyalla frack site in the NT
From	Janet Roden
Sent	26/05/2019 8:56:11 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Janet Roden North Turramurra, New South Wales, 2074, Australia

This email was sent by Janet Roden via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Janet provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Janet Roden at *********.

Rodgers, John – Wednesday, 29 May 2019 – 14:26:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	John Rodgers
Sent	29/05/2019 2:26:33 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.

- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high

pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. No fracking should occur on Australian soil! They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- The Australia Institute "Cooked with 2018 [1] gas" http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely,

John Rodgers

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Please reply to John Rodgers at *********.

Rodriguez, Aleesha – Wednesday, 29 May 2019 – 14:37:18

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Aleesha Rodriguez
Sent	29/05/2019 2:37:18 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue. I hope you listen to mine and others concerns about Origin Energy's EMP. I urge you to be in the right side of history and please think of people before profit.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental

Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml

[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Aleesha Rodriguez Nundah, Queensland, 4012, Australia

This email was sent by Aleesha Rodriguez via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Aleesha provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Aleesha Rodriguez at *********.

Roe, Jane – Wednesday, 29 May 2019 – 11:47:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jane Roe
Sent	29/05/2019 11:47:03 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jane Roe Medowie, New South Wales, 2318, Australia

This email was sent by Jane Roe via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Jane provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jane Roe at *********.

Roe, Theresa – Thursday, 30 May 2019 – 10:36:39

Subject	Objection to Origin's Kyalla frack site in the NT
From	Theresa Roe
Sent	30/05/2019 10:36:39 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Theresa Roe Nightcliff, Northern Territory, 0810, Australia

This email was sent by Theresa Roe via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Theresa provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Theresa Roe at *********.

Roe, Tony – Wednesday, 29 May 2019 – 08:55:51

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Tony Roe
Sent	29/05/2019 8:55:51 AM

Write your submission here - use our talking points to guide your submission.

Tony Roe ************* VIC 3207

Rogan, David - Wednesday, 29 May 2019 - 13:20:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	David Rogan
Sent	29/05/2019 1:20:42 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

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Below are a list of my recommendations:

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, David Rogan

This email was sent by David Rogan via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however David provided an email address (***********) which we included in the REPLY-TO field.

Please reply to David Rogan at *********.

Rogers, Adrian - Thursday, 23 May 2019 - 19:16:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Adrian Rogers
Sent	23/05/2019 7:16:00 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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This email was sent by Adrian Rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Adrian provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Adrian Rogers at *********.

Rogers, Adrian - Friday, 24 May 2019 - 11:30:24

Subject	Objection to Origin's Kyalla frack site in the NT
From	Adrian Rogers
Sent	24/05/2019 11:30:24 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

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It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

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Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Adrian Rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Adrian provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Adrian Rogers at *********.

Rogers, Adrian – Wednesday, 29 May 2019 – 16:05:18

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Adrian Rogers
Sent	29/05/2019 4:05:18 PM

Please do not frack the Beeterloo Basin. Do you not know that many of your customers know that part of the Northern Territory, and value it accordingly? You must know as well as anyone that the gas and shale oil extraction, not to mention the chemicals used in fracking have the potential to destroy the environment; something we have no right to do in our generation, in a greedy, shortsighted pursuit of selfish gain at the expense of the future. If this land is devastated by such activities, not only will the water supplies be contaminated, but a beautiful and naturally flourishing environment will be damaged beyond any possibility of repair in our lifetime.

Adrian Rogers ************ SA 5118

Rogers, Chanelle – Wednesday, 29 May 2019 – 17:52:08

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Chanelle Rogers
Sent	29/05/2019 5:52:08 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Chanelle Rogers Parkville, Victoria, 3052, Australia

This email was sent by Chanelle Rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Chanelle provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Chanelle Rogers at *********.

Rogers, Claire – Wednesday, 29 May 2019 – 21:22:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Claire Rogers
Sent	29/05/2019 9:22:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Claire Rogers East Corrimal, New South Wales, 2518, Australia

This email was sent by Claire Rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Claire provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Claire Rogers at *********.

Rogers, Greg - Sunday, 26 May 2019 - 13:21:21

Subject	Objection to Origin's Kyalla frack site in the NT
From	Greg Rogers
Sent	26/05/2019 1:21:21 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, greg rogers Stirling North, South Australia, 5710, Australia

This email was sent by greg rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however greg provided an email address (**********) which we included in the REPLY-TO field.

Please reply to greg rogers at *********.

Rogers, Jarmille - Thursday, 30 May 2019 - 17:19:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jarmille Rogers
Sent	30/05/2019 5:19:52 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Jarmille Rogers Montrose, Victoria, 3765, Australia

This email was sent by Jarmille Rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Jarmille provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jarmille Rogers at *********.

Rogers, Lisa – Tuesday, 28 May 2019 – 22:28:53

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Lisa Rogers
Sent	28/05/2019 10:28:53 PM

Your intention of fracking in his area of the Northern Territory has the likelihood of being the beginning of an environmental disaster. By fracking all wells in the area you will create devastation to the land and it's people.

Shame on you.

Stop this plan or you will put our beautiful land and it's people at risk.

Lisa Rogers

Lisa Rogers

VIC 3922

Rogers, Lorrayne - Thursday, 30 May 2019 - 10:57:35

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lorrayne Rogers
Sent	30/05/2019 10:57:35 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Lorrayne Rogers

This email was sent by Lorrayne Rogers via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Lorrayne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Lorrayne Rogers at *********.

Rohen, Jacques - Friday, 24 May 2019 - 13:12:20

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jacques Rohen
Sent	24/05/2019 1:12:20 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Jacques Rohen Branyan, Queensland, 4670, Australia

This email was sent by Jacques Rohen via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jacques provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jacques Rohen at *********.

Rokkas, Matt – Wednesday, 29 May 2019 – 11:42:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Matt Rokkas
Sent	29/05/2019 11:42:10 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Matt Rokkas Clapham, South Australia, 5062, Australia

This email was sent by Matt Rokkas via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Matt provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Matt Rokkas at *********.

Rollings, Briony - Friday, 24 May 2019 - 06:57:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Briony Rollings
Sent	24/05/2019 6:57:36 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Briony Rollings Gordon, Australian Capital Territory, 2906, Australia

This email was sent by Briony Rollings via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Briony provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Briony Rollings at *********.

Romagnoli-Townsend, Zac - Tuesday, 28 May 2019 - 12:16:58

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Zac Romagnoli-Townsend
Sent	28/05/2019 12:16:58 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Zac Romagnoli-Townsend Nubeena, Tasmania, 7184, Australia

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Please reply to Zac Romagnoli-Townsend at *********.

Romano, Gianna – Wednesday, 29 May 2019 – 18:19:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gianna Romano
Sent	29/05/2019 6:19:04 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Gianna Romano Viewbank, Victoria, 3084, Australia

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Please reply to Gianna Romano at *********.

Romely, Paul - Friday, 24 May 2019 - 20:52:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Paul Romely
Sent	24/05/2019 8:52:10 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, paul romely

This email was sent by paul romely via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however paul provided an email address (**********) which we included in the REPLY-TO field.

Please reply to paul romely at *********.

Romely, Paul - Friday, 24 May 2019 - 20:54:55

Subject	Objection to Origin's Kyalla frack site in the NT
From	Paul Romely
Sent	24/05/2019 8:54:55 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, paul romely

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Please reply to paul romely at *********.

Ronchi, Tim - Tuesday, 28 May 2019 - 19:24:38

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tim Ronchi
Sent	28/05/2019 7:24:38 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Tim Ronchi Williamstown, Victoria, 3016, Australia

This email was sent by Tim Ronchi via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Tim provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Tim Ronchi at *********.

Rooksby, Karen - Tuesday, 28 May 2019 - 20:40:56

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Karen Rooksby
Sent	28/05/2019 8:40:56 PM

Write your submission here - use our talking points to the left to guide your submission.

Karen Rooksby ************ WA 6014

Rooney, Lana - Tuesday, 28 May 2019 - 20:23:38

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Lana Rooney
Sent	28/05/2019 8:23:38 PM

Dear Minister,

Please accept this email as a submission against Origin's plan to attempt to begin fracking in the Northern Territory.

Please do not approve their application.

Approval would be an absolute disaster for our climate, our land, and our water ways. And I understand they intend using open ponds, not closed ponds as per recent laws.

Please don't allow Origin - or anyone else - to begin fracking in the Northern Territory. I'm quite sure Indigenous owners of the land have NOT given their permission.

Your sincerely

Lana Rooney Concerned citizen of Australia.

Lana Rooney ********

VIC 3922

Roper, Bob – Wednesday, 29 May 2019 – 10:54:06

Subject	Objection to Origin's Kyalla frack site in the NT
From	Bob Roper
Sent	29/05/2019 10:54:06 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

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This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Bob Roper via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ***********, however Bob provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Bob Roper at *********.

Roquet, Stefane - Friday, 24 May 2019 - 11:52:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Stefane Roquet
Sent	24/05/2019 11:52:32 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, stefane roquet Jingili, Northern Territory, 0810, Australia

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Please reply to stefane roquet at *********.

Rose, Anna – Wednesday, 29 May 2019 – 06:22:03

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Anna Rose
Sent	29/05/2019 6:22:03 AM

The risk to the Northern Territory's water, to the communities that depend on it, is too great to allow fracking to go ahead.

I have read numerous scientific reports about this that indicate the risks are just too great.

There are alternative avenues available for economic development in the NT, such as agriculture, horticulture, renewable energy, tourism, services and education. Renewable energy in particular could be hugely beneficial for the NT. You do not need to frack your beautiful territory!

Please reject Origin's request to approve their environmental management plan.

Anna Rose ************** ACT 2604

Rose, David - Thursday, 23 May 2019 - 18:00:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	David Rose
Sent	23/05/2019 6:00:12 PM

PUT A PERMANENT BAN ON FRACKING IN THE N.T.

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

A 2018 NASA study (by John Warden and Carol Rasmussen) showed that fracking operations cause high levels of escaped methane, and so natural gas extraction greatly contributes to global warming.

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land.

The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, David Rose Balcatta, Western Australia, 6021, Australia

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Please reply to David Rose at *********.

Rose, Gillian - Thursday, 23 May 2019 - 19:49:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gillian Rose
Sent	23/05/2019 7:49:26 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Gillian Rose Karama, Northern Territory, 0812, Australia

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Please reply to Gillian Rose at *********.

Rose, Gypsy - Friday, 24 May 2019 - 14:13:38

Subject	Objection to Origin's Kyalla frack site in the NT
From	Gypsy Rose
Sent	24/05/2019 2:13:38 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Gypsy Rose via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gypsy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Gypsy Rose at *********.

Rose, Jenny – Wednesday, 29 May 2019 – 14:36:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jenny Rose
Sent	29/05/2019 2:36:11 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Jenny Rose

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Please reply to Jenny Rose at *********.

Rose, Maxine - Wednesday, 29 May 2019 - 10:55:01

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Maxine Rose
Sent	29/05/2019 10:55:01 AM

I write to express my deep concern and strongest objection to this fracking project by Origin in the NT. First and foremost, we have our First Nations People wanting to protect and maintain the environment as is and that alone should be fully respected. Secondly (and equally) Origin's exploration has the potential to lead to hundreds of shale gas wells that will compromise our stunning country and our supposed commitment on a global level where we are meant to be proactive and innovative in finding renewable energy sources and reducing our current contribution to global climate damage. Thirdly (and again equally), as part of this project, Origin will be storing and using a host of chemicals in for the exploration, many of which have no health data at this point in time. Health and environmental risks are amplified by the fact that Origin's proposing the use of open tanks which will allow a flow back of millions of litres of chemical liquids during the fracking process, despite the Northern Territory fracking inquiry recommending closed tanks to minimise human and environmental risks. Lastly, it's clear from the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory and report from Jumbunna Institute at UTS that Indigenous people in the relevant regional communities (including the Betaloo Basin where this project will take place) have not given free, prior and informed consent for the project to go ahead. On this basis, we must uphold respect for both people and environment by ensuring this project does not proceed.

Rose, Trevor - Tuesday, 28 May 2019 - 19:59:41

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Trevor Rose
Sent	28/05/2019 7:59:41 PM

My message to you is simple: frack ANYWHERE in this country, and not only will I never be a customer, not only will many others place you on a permanent boycott list, but we will also do everything in our power to harm your company at every turn ... you will literally make enemies of us.

Rose, Trevor - Wednesday, 29 May 2019 - 11:27:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Trevor Rose
Sent	29/05/2019 11:27:36 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Only a scientifically illiterate imbecile, or the utterly disingenuous and foolish would fail to understand why all this fracking and mining the way we are doing it and for the reasons we're doing it, is insane ... this planet is past 'peak everything' — ie: peak oil, peak other resources, peak deforestation, peak extinction — WHICH MEANS THAT EVERY DAY YOU PEOPLE DELAY ON STOPPING YOUR DESTRUCTION IS A DAY YOU'RE HELPING ACCELERATE EVERYONE (INCLUDING YOURSELVES) TOWARDS DOOM ...

BUT MORE IMPORTANTLY: none of it is necessary, and if it wasn't for the history of destruction and the entrenchment of capitalism, I could show you a world where every single man woman and child of a 10 BILLION global population lived in absolute luxury, with ZERO extinction, and vastly less deforestation than already exists, AND NO 'PEAK ANYTHING' ... BUT IT ISN'T POSSIBLE UNDER CAPITALISM ... and while it's true that the damage done means that such objectives aren't possible in the short to medium term, they are indeed possible in the long term, if only it weren't for the fact that the world is run by scientifically illiterate, unimaginative, and ideologically insane imbeciles, and these people are so arrogant and delusional, they believe that if they can't think of a solution, therefore it doesn't exist ... stop being these people, or step aside and let people like me fix the monumental cock up you have made of everything on this planet.

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry)

recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.

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- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Trevor Rose Greensborough, Victoria, 3088, Australia

This email was sent by Trevor Rose via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Trevor provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Trevor Rose at **********.

Rosenberg, Barry - Friday, 24 May 2019 - 21:12:50

Subject	Objection to Origin's Kyalla frack site in the NT
From	Barry Rosenberg
Sent	24/05/2019 9:12:50 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

Thank you for considering my concerns.

Yours sincerely, Barry Rosenberg Bli Bli, Queensland, 4560, Australia

This email was sent by Barry Rosenberg via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Barry provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Barry Rosenberg at **********.

Rosenberg, Rosenberg - Thursday, 23 May 2019 - 17:31:58

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rosenberg Rosenberg
Sent	23/05/2019 5:31:58 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Rosenberg Rosenberg Bentleigh East, Victoria, 3165, Australia

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Please reply to Rosenberg Rosenberg at *********.

Rosenwald, Arthur – Monday, 27 May 2019 – 10:44:00

Subject	Objection to Origin's Kyalla frack site in the NT
From	Arthur Rosenwald
Sent	27/05/2019 10:44:00 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Arthur Rosenwald Mount Helena, Western Australia, 6082, Australia

This email was sent by Arthur Rosenwald via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Arthur provided an email address (********) which we included in the REPLY-TO field.

Please reply to Arthur Rosenwald at *********.

Roser, Matthew – Wednesday, 29 May 2019 – 18:53:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Matthew Roser
Sent	29/05/2019 6:53:59 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Matthew Roser Ipswich, Queensland, 4305, Australia

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Please reply to Matthew Roser at *********.

Rosewall, Elizabeth – Friday, 24 May 2019 – 06:31:07

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elizabeth Rosewall
Sent	24/05/2019 6:31:07 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Elizabeth Rosewall Marrickville, New South Wales, 2204, Australia

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Please reply to Elizabeth Rosewall at *********.

Rosewarne, Alex – Thursday, 23 May 2019 – 21:56:53

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Alex Rosewarne
Sent	23/05/2019 9:56:53 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Alex Rosewarne Braitling, Northern Territory, 0870, Australia

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Please reply to Alex Rosewarne at *********.

Ross, Christopher – Friday, 24 May 2019 – 12:21:55

Subject	Objection to Origin's Kyalla frack site in the NT
From	Christopher Ross
Sent	24/05/2019 12:21:55 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of contaminants including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days and for the whole of the late dry season when vegetation is very dry. Late dry season fires do significant damage and are a key threatening process for many endangered species as they do significant damage and remove vital cover for these species.

There is also the concern around groundwater contamination. I do not believe enough is known about the fate of contaminated groundwater and it represents an unacceptable risk to this vital resource.

A further concern is methane leakage from wells, many wells have been shown to leak methane and rivers now have methane bubbling up through them. Releasing additional greenhouse gases is irresponsible at best.

Thank you for considering my concerns.

Yours sincerely, Christopher Ross

This email was sent by Christopher Ross via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Christopher provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Christopher Ross at *********.

Ross, Dan - Monday, 27 May 2019 - 13:19:22

Subject	Re: Objection to Origin Energy's Environmental Management Plan
From	Dan Ross
Sent	27/05/2019 1:19:22 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Dan Ross

This email was sent by Dan Ross via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Dan provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Dan Ross at *********.

Ross, Estelle - Friday, 24 May 2019 - 13:50:23

Subject	Objection to Origin's Kyalla frack site in the NT
From	Estelle Ross
Sent	24/05/2019 1:50:23 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Estelle Ross via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Estelle provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Estelle Ross at **********.

Ross, Valarie – Wednesday, 29 May 2019 – 11:03:27

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Valarie Ross
Sent	29/05/2019 11:03:27 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue. It is completely unacceptable to allow Fracking given the proven riska as shown overseas.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, valarie ross Buderim, Queensland, 4556, Australia

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Please reply to valarie ross at *********.

Ross, Vera – Friday, 24 May 2019 – 10:04:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Vera Ross
Sent	24/05/2019 10:04:15 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Vera Ross

This email was sent by Vera Ross via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Vera provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Vera Ross at *********.

Rossiter, Andrew - Friday, 24 May 2019 - 04:22:35

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Andrew Rossiter
Sent	24/05/2019 4:22:35 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
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Below are a list of my recommendations:

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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Andrew Rossiter

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Please reply to Andrew Rossiter at *********.

Rossum, Harry - Friday, 24 May 2019 - 11:48:38

Subject	Objection to Origin's Kyalla frack site in the NT
From	Harry Van Rossum
Sent	24/05/2019 11:48:38 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Harry Van Rossum Boronia, Victoria, 3155, Australia

This email was sent by Harry Van Rossum via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Harry provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Harry Van Rossum at *********.

Roszkowski, Jo – Thursday, 23 May 2019 – 18:16:35

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jo Roszkowski
Sent	23/05/2019 6:16:35 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Jo Roszkowski Brighton, Victoria, 3186, Australia

This email was sent by Jo Roszkowski via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jo provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jo Roszkowski at *********.

Round, John - Wednesday, 29 May 2019 - 09:02:34

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	John Round
Sent	29/05/2019 9:02:34 AM

Write your submission here - use I am against the destruction of the water table in the NT from fracking to get gas and make money. The consequences are too terrible to deal with and the political outcomes will be massive so stop it now

Roussos, Valerie – Wednesday, 29 May 2019 – 08:05:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Valerie Roussos
Sent	29/05/2019 8:05:42 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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Below are a list of my recommendations:

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Yours sincerely, Valerie Roussos Wanguri, Northern Territory, 0810, Australia

This email was sent by Valerie Roussos via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Valerie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Valerie Roussos at *********.

Routledge, Stephen – Wednesday, 29 May 2019 – 11:52:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Stephen Routledge
Sent	29/05/2019 11:52:13 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Stephen Routledge

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Please reply to Stephen Routledge at *********.

Rovik, Patricia – Tuesday, 28 May 2019 – 20:11:06

Subject	Fracking in the Northern Territory
From	Patricia Rovik
Sent	28/05/2019 8:11:06 PM

Please do not approve any plans for Fracking in the N.T. which could find oil and/or gas. It could be a climate disaster there.

Patricia Rovik

NSW 2217

Rowand, Jordan - Wednesday, 29 May 2019 - 14:36:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jordan Rowand
Sent	29/05/2019 2:36:40 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Jordan Rowand

(Queensland, Australia)

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Please reply to Jordan Rowand at *********.

Rowe, Christen – Wednesday, 29 May 2019 – 08:01:30

Subject	Objection to Origin's Kyalla frack site in the NT
From	Christen Rowe
Sent	29/05/2019 8:01:30 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

R

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Christen Rowe Victoria, 3701, Australia

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Please reply to Christen Rowe at *********.

Rowe, Katie – Tuesday, 28 May 2019 – 19:27:07

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
-	and Hydraulic Fracturing 2019 Program EP117 N2
From	Katie Rowe
Sent	28/05/2019 7:27:07 PM

Please don't let Origin frack NT. You know it would be a disaster, not just for NT, not just for Australia but for the world. Please set an example for the rest of Australia. Show Queensland how greedy, corrupt, climate hating companies should be dealt with. Show that world that not all of Australia is stupid and greedy, that the Northern Territory government is ready to fight with the rest of the world against climate change, that the Northen Territory government cares about what is best for its people and it's land. Show that you are better. Show that there is hope.

Regards Katie

Rowe, Rob – Saturday, 25 May 2019 – 20:26:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rob Rowe
Sent	25/05/2019 8:26:15 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Please reply to Rob Rowe at *********.

Rowe, Sean – Thursday, 23 May 2019 – 20:48:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sean Rowe
Sent	23/05/2019 8:48:37 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Sean Rowe

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Please reply to Sean Rowe at *********.

Rowland, Tom - Thursday, 30 May 2019 - 06:03:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tom Rowland
Sent	30/05/2019 6:03:02 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Tom Rowland

This email was sent by Tom Rowland via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Tom provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Tom Rowland at *********.

Rowles, Stephen – Wednesday, 29 May 2019 – 20:01:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Stephen Rowles
Sent	29/05/2019 8:01:00 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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Yours sincerely, Stephen Rowles St Kilda, Victoria, 3182, Australia

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Please reply to Stephen Rowles at *********.

Rowley, April – Wednesday, 29 May 2019 – 10:55:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	April Rowley
Sent	29/05/2019 10:55:16 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, April Rowley

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Please reply to April Rowley at *********.

Rowley, Tony - Wednesday, 29 May 2019 - 10:54:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tony Rowley
Sent	29/05/2019 10:54:45 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Tony Rowley Queanbeyan, New South Wales, 2620, Australia

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Please reply to Tony Rowley at *********.

Roy, Monique – Wednesday, 29 May 2019 – 23:05:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Monique Roy
Sent	29/05/2019 11:05:37 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Monique Roy West End, Queensland, 4101, Australia

This email was sent by Monique Roy via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Monique provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Monique Roy at *********.

Roy, Paige - Thursday, 30 May 2019 - 21:39:51

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Paige Roy
Sent	30/05/2019 9:39:51 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Paige Roy

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Please reply to Paige Roy at *********.

Roy, Robert - Monday, 27 May 2019 - 09:50:39

Subject	Objection to Origin's Kyalla frack site in the NT
From	Robert Roy
Sent	27/05/2019 9:50:39 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Robert Roy Kellyville, New South Wales, 2155, Australia

This email was sent by Robert Roy via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Robert provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Robert Roy at *********.

Royal, Anne – Wednesday, 29 May 2019 – 10:55:27

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Anne Royal
Sent	29/05/2019 10:55:27 AM

I am writing to request that no fracking be carried out in the NT.

Although shale seams are deep, what guarantee is there that water tables won't be pierced? Australia must treat water as a finite source at an existential level and my concerns arise from this aspect.

Additives like guar, acetic acid, & sod. carbonate may not be toxic, but chlorine, hydroxide, ethylene glycol, polyacrylamide, & ammon. persulphate cannot be regarded as safe for storage in open ponds, as is feared to occur. At any rate, none of these chemicals occur naturally underground and don't belong there.

Finally, what actual proof will there be that benzenes, toluenes, xylenes etc. won't be used? It has to be considered that there is no environmental plan that can ever address the problems that fracking by its nature brings, bringing us to the conclusion that it just should not go ahead.

Anne Royal ************* SA 5417

Royall, Andrew – Tuesday, 28 May 2019 – 20:17:26

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Andrew Royall
Sent	28/05/2019 8:17:26 PM

I object to the environment approvals being given to Origin & believe it should not go ahead. Has it not been made abundantly clear that fracking is a major environmental disaster waiting to happen. The fracking decimates the water table & you guys know it. All the communities in NT don't want this. Are you there to govern for the people or not? Our climate is at breaking point. Gas is no better for this planet than oil or coal. It's not all about the money or even keeping your jobs. It's about doing your job. Your job is to protect this country. You can start right here.

Rozanes, Patricia – Saturday, 25 May 2019 – 09:38:12

Subject	Objection to Origin's Kyalla frack site in the NT
From	Patricia Rozanes
Sent	25/05/2019 9:38:12 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Patricia rozanes via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Patricia provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Patricia rozanes at *********.

Ruchmond, Zoe – Wednesday, 29 May 2019 – 14:42:55

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Zoe Ruchmond
Sent	29/05/2019 2:42:55 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Zoe Ruchmond Mudgeeraba, Queensland, 4213, Australia

This email was sent by Zoe Ruchmond via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Zoe provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Zoe Ruchmond at *********.

Ruffell, Chris – Wednesday, 29 May 2019 – 13:27:18

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Chris Ruffell
Sent	29/05/2019 1:27:18 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Chris Ruffell

This email was sent by Chris Ruffell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Chris provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Chris Ruffell at *********.

Ruffin, Richard – Wednesday, 29 May 2019 – 15:31:41

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Richard Ruffin
Sent	29/05/2019 3:31:41 PM

I write to respectfully ask the NT government to reject the Origin Energy fracking environmental plan.

The basis tor this request is the risk of water resources used by our indigenous communities and the environment being contaminated by the proposed open storage system, & possibly by the fracking process.

It is timely to address our indigenous communities concerns and protect their land.

Thanks for considering this request.

Richard Ruffin

y

Richard Ruffin *******

SA 5061

Rugsten, Cindy - Saturday, 25 May 2019 - 10:11:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cindy Rugsten
Sent	25/05/2019 10:11:04 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
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- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Cindy Rugsten Bellbowrie, Queensland, 4070, Australia

This email was sent by Cindy Rugsten via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Cindy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Cindy Rugsten at *********.

Rui, Dina – Thursday, 23 May 2019 – 21:41:23

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Dina Rui
Sent	23/05/2019 9:41:23 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Dina Rui Coogee, New South Wales, 2034, Australia

This email was sent by Dina Rui via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Dina provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Dina Rui at *********.

Ruiter, Astrid – Thursday, 30 May 2019 – 12:26:55

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Astrid De Ruiter
Sent	30/05/2019 12:26:55 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. At a time when we, as a human species, need to urgently make a transition from the use of fossil fuels to renewable, non-polluting energy sources it does not make any common sense to give companies permission to open up new reserves of gas, and particularly not one as environmentally destructive as coal seem gas.

I therefor strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin

Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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[5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Astrid de Ruiter Maleny, Queensland, 4552, Australia

This email was sent by Astrid de Ruiter via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Astrid provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Astrid de Ruiter at *********.

Rumble, Ben – Saturday, 25 May 2019 – 08:06:51

Subject	Why I object to Origin's Kyalla frack site in the NT
From	Ben Rumble
Sent	25/05/2019 8:06:51 AM

To the Head of the Onshore Gas division,

I am A Sydneysider named Ben Rumble and I am writing to object to the Environmental Management Plan submitted by Origin Energy for its proposed Kyalla frack site in the Northern Territory.

My key concerns with this plan are as follows:

1. FRACKING SUBSTANCES ARE HIGHLY TOXIC

The fracking chemicals Origin plans to use are harmful to human and animal health. The list of substances Origin intends to use have known short and long term health impacts and an independent review of the substances shows they are linked to acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are also extremely toxic to aquatic life with long lasting effects.

In addition to this, there are 'trade name' fracking chemicals for which no reliable health data is currently available.

2. OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISKS TO HUMAN BEINGS, ANIMALS AND THE ENVIRONMENT

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store its toxic flowback fluid.

This flowback and drilling fluid is full of toxic substances including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose an extreme risk to the already threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and/or accessible to birdlife at any time.

3. STORING TOXIC WASTE ON SITE DURING THE WET SEASON IS UNACCEPTABLE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning to store it in open dams throughout both the wet and the dry seasons. Not only could this kill birds, but extreme weather events could also cause significant downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be totally off limits to fracking in perpetuity.

4. RISKS TO TRANSPORT, TOURISM AND NEARBY RESIDENTS

Origin says they care about the cumulative environment impacts of fracking, but have failed

to speak with tourism operators about the risks of increased traffic on the Stuart Highway, or with people living downstream from their proposed fracking exploration sites.

Origin also intends to dump its toxic fracking waste in Queensland and truck it to an undetermined site when Queensland is already coping with the problem of storing and neutralizing millions of toxic salt waste. To add to this already significant burden is immoral and completely unacceptable.

5. INCREASED RISK OF BUSHFIRES IF FLARING IS NOT STOPPED ON TOTAL FIRE BAN DAYS

The region is very much prone to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to cease all flaring on total fire ban days.

Thank you for this opportunity to share my concerns. Please remember this – the decisions made today will affect the lives of thousands of Australians and the flora and fauna of our wonderful country for generations to come.

Yours sincerely, Ben Rumble Carlton NSW 2218

This email was sent by Ben Rumble via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however Ben provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ben Rumble at *********.

Rumble, Ben – Wednesday, 29 May 2019 – 08:16:43

Subject	Objections to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Ben Rumble
Sent	29/05/2019 8:16:43 AM

To the Head of the Onshore Gas division,

I am A Sydneysider named Ben Rumble and I am writing to object to the Environmental Management Plan submitted by Origin Energy for its proposed Kyalla frack site in the Northern Territory.

My key concerns with this plan are as follows:

1. FRACKING SUBSTANCES ARE HIGHLY TOXIC

The fracking chemicals Origin plans to use are harmful to human and animal health. The list of substances Origin intends to use have known short and long term health impacts and an independent review of the substances shows they are linked to acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are also extremely toxic to aquatic life with long lasting effects.

In addition to this, there are 'trade name' fracking chemicals for which no reliable health data is currently available.

2. OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISKS TO HUMAN BEINGS, ANIMALS AND THE ENVIRONMENT

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store its toxic flowback fluid.

This flowback and drilling fluid is full of toxic substances including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose an extreme risk to the already threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and/or accessible to birdlife at any time.

3. STORING TOXIC WASTE ON SITE DURING THE WET SEASON IS UNACCEPTABLE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning to store it in open dams throughout both the wet and the dry seasons. Not only could this kill birds, but extreme weather events could also cause significant downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be totally off limits to fracking in perpetuity.

4. RISKS TO TRANSPORT, TOURISM AND NEARBY RESIDENTS

Origin says they care about the cumulative environment impacts of fracking, but have failed

to speak with tourism operators about the risks of increased traffic on the Stuart Highway, or with people living downstream from their proposed fracking exploration sites.

Origin also intends to dump its toxic fracking waste in Queensland and truck it to an undetermined site when Queensland is already coping with the problem of storing and neutralizing millions of tonnes of toxic salt waste. To add to this already significant burden is immoral and completely unacceptable.

5. INCREASED RISK OF BUSHFIRES IF FLARING IS NOT STOPPED ON TOTAL FIRE BAN DAYS

The region is very much prone to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to cease all flaring on total fire ban days.

Thank you for this opportunity to share my concerns. Please remember this – the decisions made today will affect the lives of thousands of Australians, especially native title holders, as well as the flora and fauna of our wonderful country for generations to come.

Yours sincerely, Ben Rumble Carlton NSW 2218

Rumble, Christine – Thursday, 30 May 2019 – 12:14:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Christine Rumble
Sent	30/05/2019 12:14:02 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities,

about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP .for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- The NT has a financially viable tourist industry and this will last much longer than a gas industry, as well as employing more people and looking after the environment.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Christine Rumble Empire Bay, New South Wales, 2257, Australia

This email was sent by Christine Rumble via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Christine provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Christine Rumble at *********.

RUMING, GREGORY - Thursday, 23 May 2019 - 19:01:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	GREGORY RUMING
Sent	23/05/2019 7:01:45 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, GREGORY RUMING RUMING Garra, New South Wales, 2866, Australia

This email was sent by GREGORY RUMING via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however GREGORY provided an email address (*********) which we included in the REPLY-TO field.

Please reply to GREGORY RUMING at *********.

Rumpus, Marcus - Friday, 24 May 2019 - 11:15:12

Subject	Objection to Origin's Kyalla frack site in the NT
From	Marcus Rumpus
Sent	24/05/2019 11:15:12 AM

Dear Onshore Gas division,

I am a farmer in WA. I have recently had to re site my bore at a cost of \$80000 because of salt problems.

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Marcus Rumpus Henley Brook, Western Australia, 6055, Australia

This email was sent by Marcus Rumpus via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Marcus provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Marcus Rumpus at *********.

Rundell, Hayley - Monday, 27 May 2019 - 11:30:35

Subject	Objection to Origin's Kyalla frack site in the NT
From	Hayley Rundell
Sent	27/05/2019 11:30:35 AM

Dear Onshore Gas division,

Wake the hell up and look after our land before big companies back pockets!!

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by Hayley Rundell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Hayley provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Hayley Rundell at *********.

Runge, Derrick - Wednesday, 29 May 2019 - 15:58:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Derrick Runge
Sent	29/05/2019 3:58:04 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Derrick Runge Coolum Beach, Queensland, 4573, Australia

This email was sent by Derrick Runge via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Derrick provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Derrick Runge at *********.

Ruse, Sophie - Friday, 24 May 2019 - 15:32:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sophie Ruse
Sent	24/05/2019 3:32:17 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Sophie Ruse Blackheath, New South Wales, 2785, Australia

This email was sent by Sophie Ruse via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Sophie provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Sophie Ruse at *********.

Rusin, Anna – Wednesday, 29 May 2019 – 12:05:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Anna Rusin
Sent	29/05/2019 12:05:03 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Anna Rusin

This email was sent by Anna Rusin via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Anna provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Anna Rusin at *********.

Russell, Jacqui - Monday, 27 May 2019 - 17:15:53

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jacqui Russell
Sent	27/05/2019 5:15:53 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Jacqui Russell

This email was sent by Jacqui Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Jacqui provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jacqui Russell at *********.

Russell, John - Monday, 27 May 2019 - 11:28:51

Subject	Objection to Origin's Kyalla frack site in the NT
From	John Russell
Sent	27/05/2019 11:28:51 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

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It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, John Russell Brierfield, New South Wales, 2454, Australia

This email was sent by John Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at *************, however John provided an email address (**********) which we included in the REPLY-TO field.

Please reply to John Russell at *********.

Russell, Katchmirr – Monday, 27 May 2019 – 18:39:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Katchmirr Russell
Sent	27/05/2019 6:39:14 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP in a bid to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the broader indigenous community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Katchmirr Russell Acton, Australian Capital Territory, 2601, Australia

This email was sent by Katchmirr Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Katchmirr provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Katchmirr Russell at *********.

Russell, Kate - Friday, 24 May 2019 - 10:39:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kate Russell
Sent	24/05/2019 10:39:42 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Kate Russell Roebourne, Western Australia, 6718, Australia

This email was sent by Kate Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Kate provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kate Russell at *********.

Russell, Kate – Wednesday, 29 May 2019 – 12:55:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kate Russell
Sent	29/05/2019 12:55:19 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

This is a subject close to my heart, as I lived in Alice Springs in the 1980's and my sister and brother-in-law have lived there for over 30 years. In a country where much of our water is underground, fracking makes absolutely no sense. Please don't frack the Territory.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin

Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Kate Russell Burleigh Waters, Queensland, 4220, Australia

This email was sent by Kate Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Kate provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kate Russell at *********.

Russell, Michelle - Friday, 24 May 2019 - 08:45:47

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Michelle Russell
Sent	24/05/2019 8:45:47 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

As a member of the community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Michelle Russell Darlinghurst, New South Wales, 2010, Australia

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Please reply to Michelle Russell at *********.

Russell, Paul - Monday, 27 May 2019 - 09:12:41

Subject	Objection to Origin's Kyalla frack site in the NT
From	Paul Russell
Sent	27/05/2019 9:12:41 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Paul Russell

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Please reply to Paul Russell at *********.

Russell, R – Wednesday, 29 May 2019 – 18:49:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	R Uth Russell
Sent	29/05/2019 6:49:00 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, R uth Russell

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Please reply to R uth Russell at *********.

Russell, Sandra - Monday, 27 May 2019 - 15:05:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sandra Russell
Sent	27/05/2019 3:05:17 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Sandra Russell Doyles River, New South Wales, 2446, Australia

This email was sent by Sandra Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Sandra provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Sandra Russell at *********.

Russell, Shaina – Wednesday, 29 May 2019 – 13:44:57

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Shaina Russell
Sent	29/05/2019 1:44:57 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Shaina Russell Stanmore, New South Wales, 2048, Australia

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Please reply to Shaina Russell at *********.

Russell, Susie - Thursday, 23 May 2019 - 17:41:47

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Susie Russell
Sent	23/05/2019 5:41:47 PM

I have used the letter platform provided to make this submission. Apart from what is below, my main points are that:

- The Traditional Owners don't want it and their voices should be respected.
- The fugitive emissions aren't measured or counted. These are significant and have far greater impact on the atmosphere than CO2.
- We need to invest in genuine renewables that will not put greenhouse gases into the atmosphere every day they are used. Until we invest in solar and wind and solar thermal, we won't see the revolutions in storage and transmission technologies that we need.
- fracking cracks open the layers of rock under the earth and makes connections between areas previously disconnected. Water travels these paths. Fresh potable water can disappear down holes and water contaminated with heavy metals can make it's way to the surface. Fracking is dangerous and the results unpredictable. We should reject this method of extraction.

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put

drinking water, wildlife and health of community members and children at risk, including communities up and downstream.

- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

I wait with serious concern for your response to these matters.

[1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf

- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Susie Russell Elands, New South Wales, 2429, Australia

This email was sent by Susie Russell via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Susie provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Susie Russell at *********.

Russell, Teresa – Tuesday, 28 May 2019 – 22:28:27

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Teresa Russell
Sent	28/05/2019 10:28:27 PM

I am writing to express my strong objection to start fracking in the Northern Territory. Apart form it posing a massive risk to our planet because of the enormous amount of carbon it will release into the atmosphere, speeding the rate and extent of anthropomorphic climate change and its devastating results, there are two other reasons I stand with the indigenous people of the NT in opposing all fracking:

1. The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.

Origin have provided a list of chemicals that will be stored and used on the site of their exploration well Many of these chemicals do not have available health data. These chemicals must be adequately health tested before being used in the fracking processes.

The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

Origin is proposing using open tanks to store liquids that flow back after the fracking process, which will be millions of litres. This is in spite of the fact that the Northern Territory fracking inquiry recommended that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment.

Don't frack the NT. They've got more than enough problems without Origin Energy contaminating their water and destroying their lands forever. Forever is a very long time.

Your sincerely, Teresa

Teresa Russell ************* NSW 2112

Russell-Head, Katharina – Thursday, 23 May 2019 – 18:19:55

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Katharina Russell-Head
Sent	23/05/2019 6:19:55 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Katharina Russell-Head Templestowe, Victoria, 3106, Australia

This email was sent by Katharina Russell-Head via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Katharina provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Katharina Russell-Head at *********.

Russo, Elizabeth - Thursday, 23 May 2019 - 20:26:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elizabeth Russo
Sent	23/05/2019 8:26:30 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Elizabeth Russo Thornbury, Victoria, 3071, Australia

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Please reply to Elizabeth Russo at *********.

Rutledge, Margo - Friday, 24 May 2019 - 16:15:06

Subject	Objection to Origin's Kyalla frack site in the NT
From	Margo Rutledge
Sent	24/05/2019 4:15:06 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Margo Rutledge Booyong, New South Wales, 2480, Australia

This email was sent by Margo Rutledge via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Margo provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Margo Rutledge at *********.

Rutnam, Verna – Friday, 24 May 2019 – 05:00:14

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Verna Romaine Rutnam
Sent	24/05/2019 5:00:14 AM

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

Please note that I OBJECT to Origin Energy's EMP, on the grounds that it cannot and will not protect the land, water, health and wellbeing of impacted communities, as well as our shared future, from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.
- 4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning

chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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This email was sent by Verna Romaine Rutnam via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Verna Romaine provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Verna Romaine Rutnam at *********.

Ruttley, Tyler – Friday, 24 May 2019 – 10:42:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tyler Ruttley
Sent	24/05/2019 10:42:11 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Please reply to Tyler Ruttley at *********.

Ryan, Fran - Saturday, 25 May 2019 - 17:45:04

Subject	Objection to Origin's Kyalla frack site in the NT
From	Fran Ryan
Sent	25/05/2019 5:45:04 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Fran Ryan Thrumster, New South Wales, 2444, Australia

This email was sent by Fran Ryan via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at **********, however Fran provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Fran Ryan at *********.

Ryan, Hannah - Thursday, 30 May 2019 - 07:29:09

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Hannah Ryan
Sent	30/05/2019 7:29:09 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Hannah Ryan

This email was sent by Hannah Ryan via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Hannah provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Hannah Ryan at *********.

Ryan, Helen - Thursday, 23 May 2019 - 17:33:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Ryan
Sent	23/05/2019 5:33:31 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

4. The use of dangerous chemicals poses huge risks to the environment, water and community health and are exacerbated by the use of open storage tanks. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. This means that the chemicals will not only be used down the well in the high pressure fracking process, but will also pose a risk at the surface when in open storage as flowback fluid.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

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Yours sincerely, Helen Ryan Umina Beach, New South Wales, 2257, Australia

This email was sent by Helen Ryan via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Helen provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Helen Ryan at *********.

Ryan, Helen – Wednesday, 29 May 2019 – 08:28:52

Subject	mm.ryan@bigpond.com
From	Helen Ryan
Sent	29/05/2019 8:28:52 AM

We are in very dicey times .To do something that could endanger our water is just incomprehensible. Money can not save our lives in the long run.Please do not frack or any other thing to danger anymore our futureWrite your submission here - use our talking points to guide your submission.

Helen Ryan ************** NSW 2257

Ryan, Helen – Wednesday, 29 May 2019 – 13:14:35

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Ryan
Sent	29/05/2019 1:14:35 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Please reply to Helen Ryan at *********.

Ryan, Helen - Wednesday, 29 May 2019 - 13:43:11

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Helen Ryan
Sent	29/05/2019 1:43:11 PM

I am writing to object to this project going ahead. I believe that this project poses a threat to safe climate future.

The fracking process uses dangerous chemicals which represent a threat to all life, the natural environment and water sources.

I am deeply concerned as to whether the Traditional Owners of the land in question have been able to provide free, prior and informed consent to the fracking process. The rights of the Indigenous People should be a priority.

I have seen the devastating effects of fracking and I am of the opinion that, as with coal, the transition must be made away from fossil fuels and any method which causes much harm to the natural environment, to renewable energy.

Helen Ryan ************** VIC 3196

Ryan, Jacinta – Wednesday, 29 May 2019 – 15:51:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jacinta Ryan
Sent	29/05/2019 3:51:34 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Jacinta Ryan Myrtle Bank, South Australia, 5064, Australia

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Please reply to Jacinta Ryan at *********.

Ryan, Kerrie – Thursday, 30 May 2019 – 16:20:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kerrie Ryan
Sent	30/05/2019 4:20:42 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

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Yours sincerely, Kerrie Ryan

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Please reply to Kerrie Ryan at *********.

Ryan, Kieran – Thursday, 30 May 2019 – 10:39:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kieran Ryan
Sent	30/05/2019 10:39:33 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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Yours sincerely, Kieran Ryan Julatten, Queensland, 4871, Australia

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Please reply to Kieran Ryan at *********.

Ryan, Mrs - Tuesday, 28 May 2019 - 23:25:32

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Mrs Natasha Ryan
Sent	28/05/2019 11:25:32 PM

Write your submission here - use our talking points to the left to guide your submission.

Mrs Natasha Ryan ************ WA 6255

Ryan, Sally – Wednesday, 29 May 2019 – 13:21:41

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Sally Ryan
Sent	29/05/2019 1:21:41 PM

To whom it may concern,

It doesn't take an expert in fracking to learn of the potential environmental risks that can ruin a pristine environment or poison water tables for local people, just look at America's experience.

surely we are no longer foolish enough to accept companies promises to put environmental concerns over profit. When companies are fined and ordered to clean up, we see globally a trend of fighting to the bitter end. The day has not come where fracking can be proven 100 percent safe, and until that time, we as custodians of this land should look to safer long term solutions, please consider out indigenous people and their concerns for some of the worlds wildest and cleanest areas, that one day, will bring millions of tourists holidaying from their own fracked and ruined back yards.

sally ryan ******

SA 5251

Ryan, Sean – Wednesday, 29 May 2019 – 10:42:43

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sean Ryan
Sent	29/05/2019 10:42:43 AM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Sean Ryan Coolalinga, Northern Territory, 0839, Australia

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Please reply to Sean Ryan at *********.

Ryder, Gerald – Wednesday, 29 May 2019 – 11:29:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gerald Ryder
Sent	29/05/2019 11:29:21 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Gerald Ryder Floreat, Western Australia, 6014, Australia

This email was sent by Gerald Ryder via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at ************, however Gerald provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Gerald Ryder at *********.

Rynne, Memily – Wednesday, 29 May 2019 – 21:18:08

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Memily Rynne
Sent	29/05/2019 9:18:08 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Memily Rynne West Hobart, Tasmania, 7000, Australia

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