Aarons, Charmaine – Wednesday, 29 May 2019 – 21:13:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Charmaine Aarons
Sent	29/05/2019 9:13:34 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.

Even though I live in NSW 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 particularly for the Northern Territory which is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT will experience extreme heat waves, water shortages and more extreme flooding could force 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 further expansion of the gas industry and potentially to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities well beyond the NT.
- 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." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT which mean 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. Even more shocking is that Origin Energy failed to appropriately consult with all Traditional Owners, Aboriginal people and other 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].
- 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. I suggest:

- 1. Taking a precautionary approach to the cumulative climate impacts of this exploration well. Knowing that the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate, we need to rapidly decarbonise the global economy and energy system.
- 2. That wastewater should be held in enclosed tanks at all times.
- 3. Additional time be put in place immediately, including a consultation period, for communities across the Northern Territory within the Beetaloo region to be given a fair chance to ask questions about 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, Charmaine Aarons

This email was sent by Charmaine Aarons 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 Charmaine provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Charmaine Aarons at *********.

Abaloz, Richard - Thursday, 23 May 2019 - 22:19:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Richard Abaloz
Sent	23/05/2019 10:19:43 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, Richard Abaloz

This email was sent by Richard Abaloz 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 Abaloz at *********.

Abbate, Josephine – Wednesday, 29 May 2019 – 01:33:48

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Josephine Abbate
Sent	29/05/2019 1:33:48 AM

Greed will be evil origins and dispicable adanis down fall=australia/world does not want your sub corporate poison and we will fight you all the way. Ego/money/satan worshitting is the root of all evil. We as humans MUST save mother earth NOT destroy her. WTF is wrong with you corporate F\$£\$£RS. DO SOMETHING GOOD FOR THIS PLANET-STOP BEING SO DARK AND TURN TO THE LIGHT

Josephine Abbate *********
VIC 3001

Abbott, Jacob - Tuesday, 28 May 2019 - 20:39:31

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Jacob Abbott
Sent	28/05/2019 8:39:31 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.

It's absolutely a no brainer to dent my Origin access to this land.

Regards,

Jacob Abbott

Jacob Abbott ************* VIC 3153

Abdullah, Sajidah - Sunday, 26 May 2019 - 15:27:42

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sajidah Abdullah
Sent	26/05/2019 3:27:42 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, Sajidah Abdullah

This email was sent by Sajidah Abdullah 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 Sajidah provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Sajidah Abdullah at *********.

Ablitt, Susan – Thursday, 30 May 2019 – 16:16:48

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Susan Ablitt
Sent	30/05/2019 4:16:48 PM

Fracking is an extremely dangerous industry. I object to this project and do not want it to go ahead, for the following reasons:

Lack of freely given, informed consent by the Traditional Owners. 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.

The world is facing a Climate Emergency. 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. We simply cannot afford to continue with extracting and using fossil fuels if we are to maintain climate change at safe levels.

Fracking chemicals pose serious threats to human health, the natural environment and water sources. For many of the chemicals proposed by Origin, there is no health data available. This is completely unacceptable, and the use of these chemicals should not be allowed until comprehensive health evaluations are carried out. Many of them will remain in the environment and pollute essential water resources for decades, if not centuries.

Origin is proposing that millions of litres used fracking liquids are to be stored in open tanks. This is contrary to the Northern Territory fracking inquiry recommendation that all polluted water from the fracking process be stored in closed tanks to minimise risks to human life and the natural environment.

Abraham, Marg – Friday, 24 May 2019 – 02:33:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Marg Abraham
Sent	24/05/2019 2:33:45 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.
- 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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- [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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Yours sincerely, Marg Abraham

This email was sent by Marg Abraham 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 Marg provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Marg Abraham at *********.

Abrahams, Guy - Thursday, 30 May 2019 - 07:43:13

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Guy Abrahams
Sent	30/05/2019 7:43:13 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.

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 look forward to receiving your response to this submission.

- [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, Guy Abrahams Richmond, Victoria, 3121, Australia

This email was sent by Guy Abrahams 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 Guy provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Guy Abrahams at *********.

Abrahams, Jess - Friday, 24 May 2019 - 14:07:21

Subject	Don't frack the NT
From	Jess Abrahams
Sent	24/05/2019 2:07:21 PM

Dear Onshore Gas division,

As a former resident of the Northern Territory, 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, Jess Abrahams Northcote South, Victoria, 3070, Australia

This email was sent by Jess Abrahams 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 Jess provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jess Abrahams at *********.

Abud, Gaille - Friday, 24 May 2019 - 13:57:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Gaille Abud
Sent	24/05/2019 1:57:17 PM

Dear Onshore Gas division,

I am extremely concerned about our rapidly deteriorating environment from destructive and unsustainable exploitation of resources.

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, Gaille Abud Hurstbridge, Victoria, 3099, Australia

This email was sent by Gaille Abud 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 Gaille provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Gaille Abud at *********.

Achilles, Kym – Wednesday, 29 May 2019 – 11:13:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kym Achilles
Sent	29/05/2019 11:13:43 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.

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, Kym Achilles Bicheno, Tasmania, 7215, Australia

This email was sent by Kym Achilles 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 Kym provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Kym Achilles at *********.

Adams, Barry - Thursday, 23 May 2019 - 19:32:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Barry Adams
Sent	23/05/2019 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.

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 changeTo 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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- 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 has 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 flow back fluid.

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

Below is 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 wastewater 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 adequate 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 a 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,

Barry Adams 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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pressure fracking process but will also pose a risk at the surface when in open storage as flow back fluid.

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

Below is 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 wastewater 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 adequate 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 a serious concern for your response to these matters.

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Yours sincerely,	
Barry Adams	

This email was sent by Barry Adams 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 Adams at *********.

Adams, Bruce – Thursday, 23 May 2019 – 18:46:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bruce Adams
Sent	23/05/2019 6:46:30 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 urge the Department of Environment and Natural Resources to reject outright Origin Energy's EMP for its proposed fracking in the Northern Territory.

When First World nations with an advanced science-based understanding of the geophysical, environmental and climate-related risks are refusing all fracking within their national borders, why is it proceeding in the Northern Territory against the wishes of Traditional Landowners and other community stakeholders? It is an abuse of country with longterm adverse consequences.

Furthermore, there is no need to frack for gas anywhere in Australia when this nation is already one of the largest global exporters of liquified natural gas. All we need are government controls strong enough to ensure domestic requirements are met from existing sources before export quotas are agreed.

The whole argument for fracking is a fallacy based on unmitigated corporate greed. There is no other way to describe it. The more fossil fuels we exploit at a rapidly expanding rate for the sake of corporate profits, the faster we are committing climate suicide.

Yours sincerely, Dr Bruce Adams

This email was sent by Bruce Adams 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 Bruce provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Bruce Adams at *********.

Adams, Chloe - Tuesday, 28 May 2019 - 22:49:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Chloe Adams
Sent	28/05/2019 10:49:54 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.

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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, Chloe Adams Lindisfarne, Tasmania, 7015, Australia

This email was sent by Chloe Adams 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 Chloe provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Chloe Adams at *********.

Adams, Daniel - Tuesday, 28 May 2019 - 10:52:19

Subject	Objection to Origin's Kyalla frack site in the NT
From	Daniel Adams
Sent	28/05/2019 10:52:19 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. It's a crazy proposal!

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, Daniel Adams Bathurst, New South Wales, 2795, Australia

This email was sent by Daniel Adams 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 Adams at *********.

Adams, Elian - Friday, 24 May 2019 - 04:19:13

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elian Adams
Sent	24/05/2019 4:19:13 AM

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

Rejection of Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for taking the time to read my submission as a concerned member of the Australian community.

The intention of this submission is to ask the Department of Environment and Natural Resources to absolutely and wholeheartedly reject Origin Energy's EMP and in so doing, to protect the land, water, health and wellbeing of impacted communities, and to fulfill your moral obligation as representatives of our people in contributing to the mitigation of the effects of climate change.

I am, as are friends and family who have discussed the issue with me, extremely concerned about the many and interconnected risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory.

I call on you, as the leaders of this country making the decisions that will either worsen or help to mitigate the effects of climate change that our children and grandchildren will have to endure, to reject the approval of this environmental management plan for the following four 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. 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. 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." Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to the wet season (Oct 2018 to April 2019 was the hottest wet season on record). 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. 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 very unsafe 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, all plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

The following is a list of recommendations that I believe must be acted upon:

- 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 in order 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. Companies must also be required 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 truly appreciate you taking the time to read and to respond to my submission.

Yours,

Elian Adams

This email was sent by Elian Adams 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 Elian provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Elian Adams at *********.

ADAMS, GYPSY-JAZZ - Thursday, 30 May 2019 - 19:47:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	GYPSY-JAZZ ADAMS
Sent	30/05/2019 7:47:19 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.

- 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, GYPSY-JAZZ ADAMS Moruya, New South Wales, 2537, Australia

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Please reply to GYPSY-JAZZ ADAMS at *********.

Adams, Helen – Wednesday, 29 May 2019 – 07:42:20

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Helen Adams
Sent	29/05/2019 7:42:20 AM

I object to origins activities due to climate and water concerns/environmental damage. 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.

Adams, Jo - Friday, 24 May 2019 - 19:25:26

Subject	Keep fracking out of Kyalla in the NT
From	Jo Adams
Sent	24/05/2019 7:25:26 PM

Dear Onshore Gas division,

Fracking has no place in this country, we need to look at other ways to power our country.

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, Jo Adams Batman, Victoria, 3058, Australia

This email was sent by Jo Adams 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 Adams at *********.

Adams, Sheridan – Saturday, 25 May 2019 – 13:57:36

Subject	Objection to Origin's Kyalla fracking site in the NT
From	Sheridan Adams
Sent	25/05/2019 1:57:36 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, Sheridan Adams Mt. Barker, South Australia, 5251, Australia

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Please reply to Sheridan Adams at *********.

Adams, Susan – Tuesday, 28 May 2019 – 20:12:26

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Susan Adams
Sent	28/05/2019 8:12:26 PM

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.

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.

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

• 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.

Susan Adams ************* NSW 2046

Adams, Tino – Wednesday, 29 May 2019 – 17:32:56

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tino Adams
Sent	29/05/2019 5:32:56 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.

- [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, Tino Adams

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Please reply to Tino Adams at *********.

Adamson, Lesley – Saturday, 25 May 2019 – 09:52:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lesley Adamson
Sent	25/05/2019 9:52:16 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.
- 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
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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, Lesley Adamson Catalina, New South Wales, 2536, Australia

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Please reply to Lesley Adamson at *********.

Adamthwaite, Edward – Thursday, 23 May 2019 – 18:16:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Edward Adamthwaite
Sent	23/05/2019 6:16:49 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.

- 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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- [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
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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, Edward Adamthwaite Belgrave, Victoria, 3160, Australia

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Please reply to Edward Adamthwaite at *********.

Addis, Ann – Friday, 24 May 2019 – 12:53:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Ann Addis
Sent	24/05/2019 12:53:17 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.

Let's take a lead from countries around the world that have banned fracking. Our country is far to precious to risk. POSSIBLE short term gains (for whom?) and definite permanent damage to our country!

Thank you for considering my concerns.

Yours sincerely, Ann Addis Rozelle, New South Wales, 2039, Australia

This email was sent by Ann Addis 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 Ann provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ann Addis at *********.

Adlide, Virginia – Friday, 24 May 2019 – 14:33:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Virginia Adlide
Sent	24/05/2019 2:33:13 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.

Leaving toxic waste on site during the extreme weather season is an unacceptable risk. All waste must be removed. The details of how waste will be dealt with and treated must also be resolved before any fracking is approved. At the moment, there is only a vague plan to truck waste to Queensland and dump it there. Queensland already has waste storage and disposal issues from the CSG industry.

The Fracking Inquiry recommended enclosed tanks and careful waste storage. This is not happening.

Thank you for considering my concerns.

Yours sincerely, Virginia Adlide Bowral, New South Wales, 2576, Australia

This email was sent by Virginia Adlide 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 Virginia provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Virginia Adlide at *********.

Adorna, Lisa – Wednesday, 29 May 2019 – 12:29:59

Subject	NO Fracking in the NT
From	Lisa Adorna
Sent	29/05/2019 12:29:59 PM

I object to the plan to allow Origin to explore with the view to begin fracking as soon as June. The fracking process is far to dangerous, and a very real threat to the natural environment, water sources and human health.

The stakes are too high and the risks far too great.

Lisa Adorna NSW 2259

lisa adorna *******

NSW 2259

AERIA, CYNAMON - Thursday, 23 May 2019 - 18:08:28

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	CYNAMON AERIA
Sent	23/05/2019 6:08:28 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.
- 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, CYNAMON AERIA South Fremantle, Western Australia, 6162, Australia

This email was sent by CYNAMON AERIA 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 CYNAMON provided an email address (*********) which we included in the REPLY-TO field.

Please reply to CYNAMON AERIA at *********.

Agar, Dashiel - Wednesday, 29 May 2019 - 23:27:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Dashiel Agar
Sent	29/05/2019 11:27:00 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.

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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, Dashiel Agar Northcote, Victoria, 3070, Australia

This email was sent by Dashiel Agar 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 Dashiel provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Dashiel Agar at **********.

Aherne, Saoirse – Wednesday, 29 May 2019 – 13:48:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Saoirse Aherne
Sent	29/05/2019 1:48:40 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

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:

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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, Saoirse Aherne North Wollongong, New South Wales, 2500, Australia

This email was sent by Saoirse Aherne 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 Saoirse provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Saoirse Aherne at *********.

Ahrens, Jenny – Thursday, 23 May 2019 – 21:18:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jenny Ahrens
Sent	23/05/2019 9:18:25 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

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This email was sent by Jenny Ahrens 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 Ahrens at *********.

Ahrens, Jenny – Tuesday, 28 May 2019 – 21:14:57

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jenny Ahrens
Sent	28/05/2019 9:14:57 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.

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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 Jenny Ahrens 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 Ahrens at *********.

Ahrens, Rachael - Wednesday, 29 May 2019 - 22:00:31

Subject	Objection to Origin's Kyalla frack site in the NT
From	Rachael Ahrens
Sent	29/05/2019 10:00:31 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.

Do you care about Australia? It's people? It's wildlife? It's water supply? It's land? All of our future?? Can you rest in good conscience with the part you're playing in destroying it?

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, Rachael Ahrens Maroochydore, Queensland, 4558, Australia

This email was sent by Rachael Ahrens 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 Rachael provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Rachael Ahrens at *********.

Aine, Aine – Tuesday, 28 May 2019 – 19:43:53

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Aine Aine
Sent	28/05/2019 7:43:53 PM

I stand by the Traditional Owners in their opposition to Origin Company mining for gas by fracking and /or storing chemical polluted water in open ponds. I state categorically that I do not condone, and ask you not to approve Origin's Environmental management plan for their drilling wells. I refer to the risks to climate and to water as well as to the health and welfare of Indigenous Australians whose welfare has been ignored far too often. Traditional Owners have been exposed to outrageous dismissals of their rights and a proposal such as this one of Origin's would put them , water supplies of NT, and the rivers of NT under untold stress now and forever more.

Sincerely Aine

Aird, Susan - Monday, 27 May 2019 - 19:29:59

Subject	Objection to Origin's Kyalla frack site in the NT
From	Susan Aird
Sent	27/05/2019 7:29:59 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, Susan Aird Summer Hill, New South Wales, 2130, Australia

This email was sent by Susan Aird 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 Aird at *********.

Aitken, Florence – Wednesday, 29 May 2019 – 18:21:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Florence Aitken
Sent	29/05/2019 6:21:30 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
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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, Florence Aitken Brunswick, Victoria, 3056, Australia

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Please reply to Florence Aitken at *********.

Akalo, Halima - Thursday, 30 May 2019 - 08:07:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Halima Akalo
Sent	30/05/2019 8:07:12 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.

- 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, halima akalo Footscray, Victoria, 3011, Australia

This email was sent by halima akalo 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 halima provided an email address (*********) which we included in the REPLY-TO field.

Please reply to halima akalo at *********.

Akbar, Amina - Friday, 24 May 2019 - 07:28:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Amina Akbar
Sent	24/05/2019 7:28:03 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. We only have a limited amount of time to reduce emissions before the irreversible chain is set off in 2030. 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, Amina Akbar Forest Lake, Queensland, 4078, Australia

This email was sent by Amina Akbar 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 Amina provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Amina Akbar at *********.

Akehurst, Nicky - Sunday, 26 May 2019 - 10:01:06

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Nicky Akehurst
Sent	26/05/2019 10:01:06 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:

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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, Nicky Akehurst The Pocket, New South Wales, 2483, Australia

This email was sent by Nicky Akehurst 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 Nicky provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Nicky Akehurst at *********.

Alabaster, Peter – Wednesday, 29 May 2019 – 18:22:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Peter Alabaster
Sent	29/05/2019 6:22:26 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, Peter Alabaster

This email was sent by Peter Alabaster 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 Alabaster at *********.

Alagich, Miranda – Wednesday, 29 May 2019 – 07:41:33

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Miranda Alagich
Sent	29/05/2019 7:41:33 AM

I am writing in order to object in the strongest possible terms against the ongoing desire by Origin and other companies to subject our fragile country and climate to further fracking, in the Northern Territory and everywhere else in Australia.

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.

Furthermore, 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.

Moreover, 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 also serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

For all of the above listed reasons, I as a proud Australian citizen, object to this proposal and to other prospective fracking proposal in Australia.

Please save our fragile ecosystem, which is in peril even without this proposed fracking.

Alba, Maria – Wednesday, 29 May 2019 – 18:39:50

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Maria Alba
Sent	29/05/2019 6:39:50 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, Maria Alba Prospect, South Australia, 5082, Australia

This email was sent by Maria Alba 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 Alba at *********.

Albanese, Rosie - Saturday, 25 May 2019 - 15:20:04

Subject	Objection to Origin's Kyalla frack site in the NT
From	Rosie Albanese
Sent	25/05/2019 3:20:04 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, Rosie Albanese Surrey Downs, South Australia, 5126, Australia

This email was sent by Rosie Albanese 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 Rosie provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Rosie Albanese at *********.

Albany, Juliet – Tuesday, 28 May 2019 – 21:12:46

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Juliet Albany
Sent	28/05/2019 9:12:46 PM

I write to urge the Northern Territory's Government to prevent both an exploration well and fracking of any sort in the NT. These industries are counter productive to the huge potential of the north both for Agriculture and Environmental Tourism as one of the few 'clean' places left on our overpopulated planet. Alternative sources of power are available with a small amount of initiative and good policy by government. Australia has a horrendous record of environmental destruction and extinction of native species - lets stop that now and listen to the traditional owners of this land and do what we can to repair it.

Juliet Albany ************ WA 6330

ALBERTSEN, CHRISTOPHER – Monday, 27 May 2019 – 13:16:34

Subject	Objection to Origin's Kyalla frack site in the NT
From	CHRISTOPHER ALBERTSEN
Sent	27/05/2019 1:16:34 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, CHRISTOPHER ALBERTSEN The Entrance North, New South Wales, 2261, Australia

This email was sent by CHRISTOPHER ALBERTSEN 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 ALBERTSEN at *********.

Albrecht, Leticia – Wednesday, 29 May 2019 – 12:45:38

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Leticia Albrecht
Sent	29/05/2019 12:45:38 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

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, Leticia Albrecht Saint Agnes, South Australia, 5097, Australia

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Please reply to Leticia Albrecht at **********.

Alcock, Angela - Saturday, 25 May 2019 - 09:16:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Angela Alcock
Sent	25/05/2019 9:16:13 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.

- 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, Angela Alcock

This email was sent by Angela Alcock 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 Angela provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Angela Alcock at *********.

Aldach, Karina – Wednesday, 29 May 2019 – 19:32:50

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Karina Aldach
Sent	29/05/2019 7:32:50 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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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, Karina Aldach

This email was sent by Karina Aldach 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 Karina provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Karina Aldach at *********.

Aldersea, Bri – Wednesday, 29 May 2019 – 15:00:58

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bri Aldersea
Sent	29/05/2019 3:00:58 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/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Bri Aldersea Reservoir, Victoria, 3073, Australia

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Please reply to Bri Aldersea at *********.

Aldrick, Robyn – Wednesday, 29 May 2019 – 16:24:53

Subject	Kyalla frack site in the NT threatens health, wildlife, and the environment.
From	Robyn Aldrick
Sent	29/05/2019 4:24:53 PM

Dear Onshore Gas division,

I am a concerned citizen worried about health risks due to the side effects of fracking in the NT

I am also an avid traveller who has travelled extensively in Australia, including the NT. I believe that it is vitally important to conserve wildlife and environment for future generations. I would like our grandchildren be able to see and appreciate this wonderful continent just as I have.

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, Robyn Aldrick Holmesglen, Victoria, 3148, Australia

This email was sent by Robyn Aldrick 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 Robyn provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Robyn Aldrick at *********.

Alesandro, Michael – Saturday, 25 May 2019 – 08:59:00

Subject	Objection to Origin's Kyalla frack site in the NT
From	Michael Alesandro
Sent	25/05/2019 8:59:00 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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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 Alesandro Gordon, New South Wales, 2072, Australia

This email was sent by Michael Alesandro 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 Alesandro at *********.

Alexander, Adrienne – Tuesday, 28 May 2019 – 20:58:18

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Adrienne Alexander
Sent	28/05/2019 8:58:18 PM

I object to Origin's Energy plans to mine Shale by drilling and fracking to extract gas. Burning gas creates green house gases. We have experienced the hottest year yet in Australia with appalling consequences to our wildlife, drought, fish death and failed crops let alone the destruction to the environment.

I object to this and will certainly never buy energy from Origin.

Such mining will also cause harm to the indigenous owners who are not being considered.

It is a ludicrous proposal which will cause harm to future Australians.

Adrienne Alexander

NSW 2127

Alexander, Ashok - Monday, 27 May 2019 - 16:40:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Ashok Alexander
Sent	27/05/2019 4:40:17 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.

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OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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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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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, Ashok Alexander Darwin City, Northern Territory, 0800, Australia

This email was sent by Ashok Alexander 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 Ashok provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Ashok Alexander at *********.

Alexander, Kate – Thursday, 30 May 2019 – 09:44:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kate Alexander
Sent	30/05/2019 9:44:37 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

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.
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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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- [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, Kate Alexander Fitzroy North, Victoria, 3068, Australia

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Please reply to Kate Alexander at *********.

Alexander, Oshanna – Friday, 24 May 2019 – 09:28:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Oshanna Alexander
Sent	24/05/2019 9:28:25 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.

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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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Please reply to Oshanna Alexander at *********.

Ali, Lorrain – Saturday, 25 May 2019 – 19:49:08

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lorrain Ali
Sent	25/05/2019 7:49:08 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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Yours sincerely, Lorrain Ali Keperra, Queensland, 4054, Australia

This email was sent by Lorrain Ali 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 Lorrain provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Lorrain Ali at *********.

Allan, Thea – Wednesday, 29 May 2019 – 14:46:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Thea Allan
Sent	29/05/2019 2:46:03 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.

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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.

- [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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This email was sent by Thea Allan 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 Thea provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Thea Allan at *********.

Allen, Greer - Thursday, 23 May 2019 - 17:53:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Greer Allen
Sent	23/05/2019 5:53:03 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.

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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.
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Yours sincerely, Greer Allen Edgecombe, Victoria, 3444, Australia

This email was sent by Greer Allen 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 Greer provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Greer Allen at *********.

Allen, Jeffrey – Tuesday, 28 May 2019 – 18:39:51

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Jeffrey Allen
Sent	28/05/2019 6:39:51 PM

Discovering oil and gas is ok, as it usually "gushes" out of the well under its own pressure. Burning that oil and gas is, of course polluting and so unsustainable.

As if that's not bad enough, fracking is forcing that oil and gas out of the ground by using water pressure. What about the damage done to the ground? But it gets worse!

The water that is used comes from our precious water table. That is OUR water table. NOT ORIGIN'S! But worse!

The water, once it is used to force the gas and oil out, is POISONED. It can't be re-used. So it has to be kept separate from the "good" (unpoisoned) water table water.

Recommendations are to keep it in tanks (how long for?), but ORIGIN want to just keep it in open dams! Really? How bad can you get?

That POISONED water WILL find its way back to the water table. Once THAT is poisoned, all life in the outback Northern Territory stops.

I am an Origin customer. If this goes ahead I wont be. Nor will my associates and friends. Its just NOT WORTH IT!

Jeffrey Allen ************* ACT 2617

Allen, Karen - Friday, 24 May 2019 - 12:09:22

Subject	Objection to Origin's Kyalla frack site in the NT
From	Karen Allen
Sent	24/05/2019 12:09:22 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, Karen Allen Booyong, New South Wales, 2480, Australia

This email was sent by Karen Allen 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 Allen at *********.

Allen, Mia – Wednesday, 29 May 2019 – 15:14:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Mia Allen
Sent	29/05/2019 3:14:14 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 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, Mia Allen

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Please reply to Mia Allen at *********.

Allen, Paul - Friday, 24 May 2019 - 11:55:45

Subject	Objection to Origin's Kyalla frack site in the NT
From	Paul Allen
Sent	24/05/2019 11:55:45 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.

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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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 allen Dynnyrne, Tasmania, 7005, Australia

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Please reply to paul allen at *********.

Allen, Paul – Wednesday, 29 May 2019 – 12:26:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Paul Allen
Sent	29/05/2019 12:26:02 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.
- 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.

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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, Paul Allen

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Please reply to Paul Allen at *********.

Alley, Kingsley - Sunday, 26 May 2019 - 17:25:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kingsley Alley
Sent	26/05/2019 5:25:00 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.

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Yours sincerely, Kingsley Alley Wagaman, Northern Territory, 0810, Australia

This email was sent by Kingsley Alley 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 Kingsley provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Kingsley Alley at *********.

Alliance, PC

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

See Next page

Introduction

The Protect Country Alliance (PCA) brings together impacted landholders, communities, and civil society groups concerned about gas fracking proposals or projects in the Northern Territory. The Alliance is made up of delegates representing regional communities across the NT including; Elliott, Marlinja, Minyeri, Borroloola, Mataranka, Jilkminngan and Hermannsberg. The PCA also has member organisations based in all major population centres across the NT.

Based on ongoing relationships and conversations with landholders, Traditional owners, and groups across the NT, the PCA writes to object to the Origin EMP on the grounds that it does not sufficiently demonstrate best practice, nor has engaged in or accurately represented the outcomes of its community consultation.

Origin's claims that all affected pastoral landholders and Native Title holders have been consulted and consent to the activity contained in is EMP is incorrect and deliberately misleading.

The Protect Country Alliance works with many pastoral lease holders and Native Title groups directly affected by Origin's proposed works who have strongly and consistently opposed fracking activity on their land and in their region. Records of this opposition will be supplied through direct submissions to this EMP from affected groups.

Origin should be required to accurately represent the views and positions of affected landholders before the EMP can be properly considered.

Concerns related to fracking chemicals

Origin has chemicals listed that will be used in the fracturing process that have no data available as to the actual contents contained by these chemicals. The NT government needs to ensure that all chemicals used have been through health testing by the manufacturers before use.

Many of the chemicals that are being used present no danger as a stand alone product. However, in the fracking process, many chemicals get mixed together,

including with unknown elements in the ground. This can result in toxic and harmful chemicals. More information is required as to how the proposed chemicals mix and what the products of this might be.

Some of the fracking chemicals Origin plans to use are harmful to health both human and animal health and more study is required through the SREBA before they can be used. The list of substances Origin want to use has 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.

Open-air wastewater tanks pose unacceptable risk to biodiversity

The Protect Country Alliance has strong concerns at Origins plans to store wastewater fluid and toxic chemical flowback fluid in open air waste ponds. This practice directly contradicts recommendation 7.12 from the Fracking Inquiry and presents significant risk to biodiversity in the region.

First and foremost the area concerned can only be described as data deficient in relation to Biodiversity and environmental information and these inadequacies in knowledge fundamentally challenge the conclusions in the EMP. As an example to just do a desktop audit of Biodiversity about the area and then assume that there are no concerns does not reflect the data deficient basis of the systems used. This lack of information about the region's biodiversity extends across the land and water throughout the region and was highlighted in the Pepper Inquiry.

It is vitally important that work be done to provide guidance around these many issues as in situations where knowledge is uncertain the Precautionary Principle underlying our environmental legislation requires a very cautious approach.

If companies are wishing to exploit non-renewable resources in the area they have a responsibility to do the work required to ensure that environmental risks are 'acceptable'. Decisions based on such limited and flawed data are unacceptable and a range of on-ground work needs to be undertaken to improve the knowledge base upon which to evaluate decisions.

Open water storages should be not allowed in line with the Pepper inquiry recommendation 7.12 and others. To allow these pits will lead to dramatic and unacceptable changes in Biodiversity and massively increase risks that would not happen if the enclosed tanks were used.

Cane Toads Rhinella Marina

Cane toads Rhinella marina are a major threat to a number of animal species with population level declines documented (Doody 2004, 2006, 2009). Allowing open water storage pits will dramatically increase cane toad numbers in the region with broad biodiversity implications.

Doody (2009) concludes, "We observed population-level declines in Australian predatory lizards caused by the arrival of an invasive species, Bufo marinus, at two sites along the Daly River. In contrast, there were no significant declines in populations of Crocodylus johnstoni. Amphibolurus gilberti populations increased substantially, presumably due to the losses in Varanus panoptes, a known predator of this species. These findings indicate that the invasion of B. marinus into this ecosystem caused a structural change in the lizard community. Changes in the abundance and community structure of these top predators may alter species-species interactions, in particular patterns of predation and competition, and the energy dynamics of the ecosystem. Recovery from low numbers, and possibly local extinction, may depend on the control of Bufo marinus, and/or the recolonization from individuals from the surrounding landscape.¹"

Further personal communication with the author indicates follow up surveys showed some species, like V.panoptes and V.mitchelli, are no longer present at the survey sites. Follow up work in the Kimberley's reinforced the initial findings from the NT and indicated a broader range of varanid species was impacted.

¹ Doody, J.S., Green, B., Rhind, D., Castellano, C.M., Sims, R. & Robinson, T., (2009). 'Population-level declines in Australian predators caused by an invasive species'. Animal Conservation, 12, 46-53.

Many areas of the NT were originally thought to be too dry for cane toads to colonise but this has been shown to be incorrect and the main reason that toads have been able to colonise large areas of Semi-arid and arid NT is because of the use of Open water storage in the cattle industry. The creation of such spaces for water and wastewater storage will create a situation where cane toads will seek refuge and breed in the area. This would otherwise not be the case and the cane toad population would be massively increased if open water pits were introduced.²

This is particularly destructive of varanid populations and other reptile species. By introducing standing water bodies into an area the cane toad population will not only increase but breeding of cane toads will occur at the sites. This introduces a size class of cane toads into the area that would not be occurring without the water pits and this causes dramatic declines and even local extinctions of smaller Varanid species and the juvenile stages of the larger Varanid species such as V.panoptes, V.gouldii and V.mertensii.

Species that will be impacted negatively are likely to include:

Varanus acanthurus	Ridge-tailed Monitor
Varanus baritji	Black-spotted Ridge-tailed Monitor
Varanus indicus	Mangrove Monitor
Varanus mertensi	Merten's Water Monitor
Varanus mitchelli	Mitchell's Water Monitor
Varanus scalaris	Spotted Tree Monitor
Varanus tristis	Black-tailed Monitor
Tiliqua scincoides	Common Blue-Tongued Lizard

² Letnic, M., Webb, J.K., Jessop, T.S., Florance, D. & Dempster, T. (2014). 'Artificial water points facilitate the spread of an invasive vertebrate in arid Australia', Journal of Applied Ecology 51, 795–803

Varanus panoptes	Yellow Spotted Monitor
Varanus gouldii	Sand Monitor

There is also research indicating impacts on smaller lizard species due to large toad populations. In a two-year study in the Roper River region of the Northern Territory, Catling et al. (1999) found that high cane toad densities were associated with a significant reduction in the abundance of small lizards, possibly caused by reducing their invertebrate food supply.³ Like so many of these aspects of the local environment there is a deficiency of data that should be addressed before any such changes are created in the local environment.

Plastic lined pits can be death traps for many species of native frogs that do not have toe pads. Plastic pits have been used as traps for some frog species. The risk includes many of the burrowing Frog fauna in the Beetaloo region and these species are likely to move to standing water bodies to breed. The pits should not be allowed, but if they are they need to be carefully designed. This elevated risk includes the period over the wet season where the pits may be emptied to avoid them overflowing. They will still collect water and become frog breeding sites, especially for burrowing frogs and any residues will cause problems E.G. Surfactants are highly toxic to native frog tadpoles at very low concentrations.

There are additional issues with the use of chemicals and this puts the waste water elements of this plan in a particularly high risk category. Surfactants and many other chemicals are especially toxic for frogs and have implications for other species such as birds. Even if the pits are emptied there will be residues from waste water present and this will impact on wildlife.

Bird life

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Anecdotal evidence from ongoing discussions with land holders and Traditional owners in the proposed drilling area highlight the impact that a record breaking hot and dry season has had on local water and wildlife. Lake Woods has very little water

³ Catling, P.C., Hertog, A., Burt, R.J., Wombey, J.C. & Forrester, R.I. (1999). 'The short-term effect of cane toads (Bufo marinus) on native fauna in the Gulf Country of the Northern Territory'. Wildlife Research 26:161–185.

left in it. This has resulted in birds and other wildlife relying on this limited body of water. If Origin were to introduce large bodies of open water in the area through open waste ponds- there would be wildlife accessing these ponds. This could poison wildlife and spread contamination. Many bird species will drink from available water pits and bathe in the shallows and some will plunge into the water to drink and to preen. Water with surfactants or toxic chemicals can cause issues and lead to deaths of birds.

The claim has been made that surfactants are "no more toxic than common household substances", and are 'commonly found in everyday products, from toothpaste to laxatives to detergent to ice cream' (University of Colorado, 2014). However, surfactants can be deadly for birds and frogs. This complete lack of concern for biodiversity is unacceptable especially given the biodiversity crisis highlighted by the Paris accord in 2019.

Most bird taxa have a gland at the base of the tail, the uropygial or preen gland. The oil it produces keeps the feathers flexible and assists the interlocking barbules to stay intact, thus forming a barrier that helps repel water and insulate the bird.⁴ In the case of waterbirds, preening oil helps them stay afloat, and without it birds may even drown.⁵

Birds may also die because surfactants reduce the ability of feathers to act as insulation in cold weather, and have been used in the USA to control populations of pest species (Lustick, 1976). In semi-arid areas of the NT temperatures have been known to fall very low in winter, and in the driest months of the year, the time when birds are most likely to be seeking water.

There is a range of other chemicals within the flow back and other waste water from fracking and it is unacceptable to expose our biodiversity to the associated risks when there is a solution of enclosed storage as recommended.

⁵ YH Chen, HC Peh, SW Roan (2015) Establishment of Uropygial Gland Growth Curves for White, Three-Way Crossed Mule Ducklings Revista Brasileira de Ciência Avícola.2015

⁴ Jessup, David A; Miller, Melissa A; Ryan, John P; Nevins, Hannah M; Kerkering, Heather A; Mekebri, Abdou; Crane, David B; Johnson, Tyler A; Kudela, Raphael M Bennett, Peter M. (editor) (2009) Mass Stranding of Marine Birds Caused by a Surfactant-Producing Red Tide PLoS ONE, , Vol.4(2)

There is also no information in the EMP about how biodiversity, especially birdlife would be prevented from accessing the wastewater. There is also no mention of the pond covers being heat or extreme weather tested for Territory conditions. fracking wastewater is suggested to remain on site for over 12 months, including around 6 million litres of waste remaining on site during the unpredictable wet season months. This is unacceptable. The occasional requirement for a cover over the open ponds does not meet Recommendation 7.12.

Biocides are also very toxic to a range of wildlife and are especially dangerous in aquatic systems. The water systems like the Gum Ridge Aquifer are poorly studied in relation to troglofaunal and aquatic flows and yet very dangerous substances are being injected into these areas by these practices.

Well Integrity

The EMP confirms the use of biocides which confirms corrosive bacteria are a concern. If this is being done to keep corrosive bacteria at bay then the point about corrosion from the outside in becomes relevant.

Feedback from experts and research indicates this is potentially a massive problem. It means all wells are going to fail eventually and potentially in the near future and the contents, including these biocides and other chemicals will leak, and these breaches are likely to be 'close to surface', right in the aquifers.

The Oil and Gas Industry can only control sulphide reducing bacteria (SRB) when it is on the inside of a well with biocides. The outside of the well is in a natural control until. A gas or oil well goes through the environment where they are (mainly damp soil with organic material present or other bacteria which can provide a food source/or aquifers), this gas or oil well, if cement coated gives the SRB food and their numbers grow as the natural control (food) is no longer in short supply. As they "eat" the sulphates in the cement they exhaust Hydrogen Sulphate (rotten egg gas) which in the presence of water turns to acid, the whole cycle starts again.

How long a wells external surface will last before it is broken down enough to allow cross contamination of the Aquifers, depends greatly upon the number of Bacteria

present, but this will eventually cause the connection between neighbouring aguifers to occur.

An example not from the Beetaloo but highlighting similar issues: The effect of corrosive water on cementing and casing in the NT is provided by deep oil exploration wells (McDills and Dakota) drilled in the Perdika/Great Artesian Basin in the 1960s. (The Perdika Basin is one of the prospective unconventional shale gas areas of the NT). Now, some fifty years later, the steel casing has almost entirely corroded away, resulting in inter-aquifer contamination. This well required expensive rehabilitation work to stem artesian flow.⁶ This single bore cost the Territory and Commonwealth Governments \$500,000 to plug as the company responsible for the well was insolvent. This example highlights the issue of operator insolvency due to the boom and bust cycles of oil and gas development which complicates efforts to hold liable parties responsible and provide for timely environmental reclamation.⁷

This information confirms that corrosion is an issue in the CSG areas of QLD and confirms our fears that this is going to cause wells to fail eventually and injected chemicals and related material released from the fractured rock layers in the basin will leach eventually into waterways. This includes the Roper and McArthur and other flows out of the catchments in the Beetaloo area.

Saltel Industries was approached in 2016 by one of Australia's leading natural gas producers, to tailor a solution for their unusual problem: in some of their CSG wells in Queensland, the 7in production casing must cope with severe and localized external corrosion, developing at shallow depth. These corrosion cases are suspected to be caused by bacteria growing under specific pressure and temperature environments. Microbiologically-influenced corrosion seems to be systemic in the region, and other operators might encounter similar issues in their CSG wells.8 There needs to be further study of this issue in the SREBA before these wells are allowed to proceed.

⁶ Humphreys and Kunde, 2004

⁷ Northern Territory Branch of the International Association of Hydrogeologists

⁸ https://www.einpresswire.com/article/480473562/xpandable-patches-to-extend-the-life-ofcorroded-csg-wells-in-queensland-australia

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.

The Protect Country Alliance works closely with communities in the immediate vicinity of the proposed drilling site. There is wide agreement in these communities that weather systems in the NT, particularly during the wet season, are not predictable enough to rely on advanced notice to adequately prepare the drilling site (and waste ponds) to withstand extreme rainfall and storms.

The practice proposed in this EMP of maximising evaporation of flowback fluid through open-top tanks places communities such as Marlinja and Elliott at significant risk. The area is subject to significant monsoonal events. These events can bring enormous rainfall and can occur between November and May. Such systems moving out of the Gulf of Carpentaria mean there is no mechanism to protect open pits.

Transport risks and tourism impacts

Landholders and traditional owners in the NT are well aware of the increased traffic associated with mining activities. Pastoralists at Lucy Creek Station recall 50 road trains moving through their property on the first day of an experimental fracking well drilled by Petrofrontier in 2013. Just one well caused huge disruptions to their way of life and quality of roads in and out of the station.

By Origin's EMP only focussing on one well, it fails to capture what the cumulative impact of drilling wells could look like in terms of increased traffic movements on roads in the community, as well as across the NT.

A predicted 44 vehicle movements per day is significant as it is. Local roads are used by pastoralists and local communities to access water bores and to access country for cultural reasons. Deterioration of roads and increased traffic will create safety issues. As Origin intends to drill more wells in the future this number of vehicle movements will be significantly multiplied.

The NT already experiences heavy traffic on the Stuart Highway during peak tourist seasons. Tourism operators and local business along the Stuart highway should be properly consulted as part of the approval process for Origin to begin drilling. 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.

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.

Further to this, controlled burning has been relied upon in these areas as a highly effective land management tool- This approach has greatly reduced the likelihood of the ignition and spread of catastrophic fire. Industry developing gasfields would make the current effective fire management regimes impossible. This could also impact on local jobs throughout this region in controlled burning and land management departments.

Conclusion

In concluding, the PCA, on behalf of the landholders, traditional owners and concerned communities that we work with, strongly object to this EMP and believe that there needs to be many revisions prior to exploration.

Protect Country Alliance

Graeme Sawyer, Jesse Hancock

Further References

Doody J. S., Green B., Sims R. (2004). 'The Impact of Cane Toads on Native Frogeating Predators in the Northern Territory'. A Progress Report submitted to CSIRO for Sustainable Ecosystems, Canberra 1 November 2004 Applied Ecology Research Group, University of Canberra, ACT 2601

Doody J. S., Green B., Sims R. and Rhind, D. I (2006) nitial impacts of invasive cane toads (Bufo marinus) on predatory lizards and crocodiles in Science of Cane Toad Invasion and Control. Proceedings of the Invasive Animals CRC/CSIRO/Qld NRM&W Cane Toad Workshop5-6 June 2006, Brisbane

Mann, R.M., Bidwell, J.R. (2000) The acute toxicity of agricultural surfactants to the tadpoles of four Australian and two exotic frogs, Environmental Pollution 114 pp195-205

Allison, Jennifer - Thursday, 23 May 2019 - 18:32:22

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jennifer Allison
Sent	23/05/2019 6:32:22 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.

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, Jennifer Allison Wingham, New South Wales, 2429, Australia

This email was sent by Jennifer Allison 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 Jennifer provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jennifer Allison at *********.

Allsop, David - Wednesday, 29 May 2019 - 12:05:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	David Allsop
Sent	29/05/2019 12:05:14 PM

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

Not enough consultation has taken place with the aboriginal communities who will be impacted by your proposed fracking. This is not acceptable. You must consult with these traditional owners and not proceed if they don't want you to.

Yours sincerely, David Allsop Fairlight, New South Wales, 2094, Australia

This email was sent by David Allsop 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 Allsop at *********.

Almond-Smith, Jasper - Wednesday, 29 May 2019 - 15:34:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jasper Almond-Smith
Sent	29/05/2019 3:34:43 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.
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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, Jasper Almond-Smith Nowra, New South Wales, 2541, Australia

This email was sent by Jasper Almond-Smith 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 Jasper provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Jasper Almond-Smith at *********.

Aloisio, Katrina – Sunday, 26 May 2019 – 20:56:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Katrina Aloisio
Sent	26/05/2019 8:56:36 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.

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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:

- 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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Please reply to Katrina Aloisio at *********.

Alquier, Hannah - Thursday, 23 May 2019 - 22:41:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Hannah Alquier
Sent	23/05/2019 10:41:16 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.

- 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, Hannah Alquier Willow Grove, Victoria, 3825, Australia

This email was sent by Hannah Alquier 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 Alquier at *********.

Alsford, Jillian - Sunday, 26 May 2019 - 17:23:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jillian Alsford
Sent	26/05/2019 5:23:42 PM

I would like to ask you why you would completely ignore firstly the aboriginal communities plus all of us that have been against fracking and just go ahead and ruin the Northern Territory for all time. You have no shame. It just comes down to the all important power of money. Stop and think what will happen to this earth that we live on.

The human cost of your ancestors to be born in years to come because of your greed. This action is unconscionable. 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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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, jillian alsford Lindfield, New South Wales, 2070, Australia

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Please reply to jillian alsford at *********.

Alsop, Emma - Thursday, 23 May 2019 - 18:41:28

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Emma Alsop
Sent	23/05/2019 6:41:28 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.

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Yours sincerely, Emma Alsop Beaumaris, Victoria, 3193, Australia

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Please reply to Emma Alsop at *********.

Althaus, Fiona – Saturday, 25 May 2019 – 19:04:33

Subject	Objection to Origin's Kyalla frack site in the NT
From	Fiona Althaus
Sent	25/05/2019 7:04:33 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, fiona althaus Forrestfield, Western Australia, 6058, Australia

This email was sent by fiona althous 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 fiona provided an email address (*********) which we included in the REPLY-TO field.

Please reply to fiona althous at *********.

Altman, Cass – Wednesday, 29 May 2019 – 11:05:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cass Altman
Sent	29/05/2019 11:05:32 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.

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, Cass Altman

This email was sent by Cass Altman 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 Cass provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Cass Altman at *********.

Alvarez-Mon, Lulu - Friday, 24 May 2019 - 11:35:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lulu Alvarez-Mon
Sent	24/05/2019 11:35:34 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 concerned with the wellbeing of fellow Australians and Asutralian land in the Northern Territory,, 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, lulu alvarez-mon Clontarf, New South Wales, 2093, Australia

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Please reply to lulu alvarez-mon at *********.

Alves-Ferreira, Ricardo – Wednesday, 29 May 2019 – 16:17:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ricardo Alves-Ferreira
Sent	29/05/2019 4:17:16 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.

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
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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

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Please reply to Ricardo Alves-Ferreira at *********.

Alwis, Damian - Monday, 27 May 2019 - 15:32:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Damian De Alwis
Sent	27/05/2019 3:32:03 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 really don't understand why fracking is still being proposed in this sun burnt country of ours where renewable solar should be rapidly increasing!

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, Damian de Alwis Amaroo, Australian Capital Territory, 2914, Australia

This email was sent by Damian de Alwis 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 Damian provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Damian de Alwis at *********.

Alwis, Damian - Tuesday, 28 May 2019 - 21:03:11

Subject	Don't allow exploration for Oil in the NT!!!
From	Damian De Alwis
Sent	28/05/2019 9:03:11 PM

This proposed 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 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.' This included communities in the Beetaloo basin where this exploration well will be located. A report from the Jumbunna Institute at UTS, 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.

This cannot go ahead and should not go ahead!

Please show more leadership, money is not everything and money can be earned from so many better projects and investments that lead to more jobs in the NT!

AM, Elizabeth - Friday, 24 May 2019 - 15:20:09

Subject	Objection to Origin's Kyalla frack site in the NT
From	Elizabeth Morgan AM
Sent	24/05/2019 3:20:09 PM

Dear Onshore Gas division,

I am writing to express my objection and deep concern about 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 about them.

OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

This flow back 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 is planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause major downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be made 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 wants 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. I urge you to give total consideration to the points made and consider long term outcomes instead of short term gains.

Yours sincerely, Elizabeth Morgan AM Taringa, Queensland, 4068, Australia

This email was sent by Elizabeth Morgan AM 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 Morgan AM at *********.

AM, Susan – Wednesday, 29 May 2019 – 12:04:17

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Susan Kendall AM
Sent	29/05/2019 12:04:17 PM

I strongly object to this project and do not believe it should proceed. I think it is a threat to our safe climate future. The fracking process uses dangerous chemicals that threatens human health, the environment and water sources. This is exacerbated by the use of open storage tanks.

I am also concerned traditional owners have not provided informed consent.

Susan Kendall AM ************* NSW 2068

Amala, Jack - Friday, 24 May 2019 - 00:32:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jack Amala
Sent	24/05/2019 12:32:45 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.
- 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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- [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

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Please reply to Jack Amala at *********.

Ambler, Susan – Saturday, 25 May 2019 – 15:13:53

Subject	Objection to Origin's Kyalla frack site in the NT
From	Susan Ambler
Sent	25/05/2019 3:13:53 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, Susan Ambler

• Katoomba DC, New South Wales, 2780, Australia

This email was sent by Susan Ambler 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 Ambler at *********.

Ambler, Susan – Wednesday, 29 May 2019 – 14:41:27

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Susan Ambler
Sent	29/05/2019 2:41:27 PM

I wish to Object to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2.

I object because;-

- 1. Hydraulic fracturing methods and the gases that are produced are a threat to our climate. We should be moving away from coal, oil and gas and towards sustainable, environmentally safer energy
- 2. Hydraulic fracturing methods, products and toxic wastes also endanger our water supplies and farmlands.
- 3. These methods are a threat to people and the environment in surrounding areas. Especially the use of open storage tanks for toxic by-products.
- 4. Local Aboriginal people, and others, strongly object to this exploration well and any further fracking activities on and near to their lands.

For any one of these reasons this plan should be rejected. This is not a plan for the safe and sustainable future of the NT or Australia.

Thank you.

Susan Ambler ************* NSW 2780

Ambrose, Jane - Tuesday, 28 May 2019 - 19:23:39

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Jane Ambrose
Sent	28/05/2019 7:23:39 PM

I am opposed to industrial shale gas fields in Australia. If the Northern Territory's gas is drilled and burned, the carbon emissions would equal fifty new coal fired power stations. This unacceptable increase in carbon emissions would lead to even more dangerous climate change. Shale gas drilling would also pose a serious threat to water quality across large areas. And the first Australians of the Northern Territory oppose shale oil and gas drilling on their lands and which would seriously affect their connection to culture and land.

Jane Ambrose ************* NSW 2622

Ambrose, Stephan – Saturday, 25 May 2019 – 06:14:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Stephan Ambrose
Sent	25/05/2019 6:14:21 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:

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- 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, Michael Ambrose Mount Waverley, Victoria, 3149, Australia

This email was sent by Stephan Ambrose 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 Stephan provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Stephan Ambrose at *********.

Ambrose, Tim - Tuesday, 28 May 2019 - 18:38:55

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Tim Ambrose
Sent	28/05/2019 6:38:55 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.

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.

Tim Ambrose *********

VIC 3350

Ambrosio, Leandro – Friday, 24 May 2019 – 13:05:57

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Leandro Ambrosio
Sent	24/05/2019 1:05:57 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.

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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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, Leandro Ambrosio White Gum Valley, Western Australia, 6162, Australia

This email was sent by Leandro Ambrosio 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 Leandro provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Leandro Ambrosio at *********.

Amess, Joanne – Thursday, 23 May 2019 – 20:53:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Joanne Amess
Sent	23/05/2019 8:53:32 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:

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Below are a list of my recommendations:

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Yours sincerely, Joanne Amess Cardiff, New South Wales, 2285, Australia

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Please reply to Joanne Amess at *********.

Amoore, Dane - Wednesday, 29 May 2019 - 11:18:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Dane Amoore
Sent	29/05/2019 11:18:11 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.

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Yours sincerely, Dane Amoore

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Please reply to Dane Amoore at *********.

Amor, Annette - Wednesday, 29 May 2019 - 18:12:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Annette Amor
Sent	29/05/2019 6:12:59 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

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Yours sincerely, Annette Amor

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Please reply to Annette Amor at *********.

Ampt, Helen – Sunday, 26 May 2019 – 03:58:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Ampt
Sent	26/05/2019 3:58:59 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] 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, Helen Ampt

This email was sent by Helen Ampt 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 Ampt at *********.

Anderberg, Eva – Wednesday, 29 May 2019 – 13:09:22

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Eva Anderberg
Sent	29/05/2019 1:09:22 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.

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Please reply to Eva Anderberg at *********.

Andersen, Siri - Thursday, 23 May 2019 - 20:19:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Siri Andersen
Sent	23/05/2019 8:19:12 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.
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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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- [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, Siri Andersen Waverley, New South Wales, 2024, Australia

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Please reply to Siri Andersen at *********.

Anderson, Alan - Monday, 27 May 2019 - 11:09:55

Subject	Objection to Origin's Kyalla frack site in the NT
From	Alan Anderson
Sent	27/05/2019 11:09:55 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, Alan Anderson Girraween, Northern Territory, 0836, Australia

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Please reply to Alan Anderson at *********.

Anderson, Allan - Thursday, 30 May 2019 - 16:26:14

Subject	andalla0480@gmail.com
From	Allan Anderson
Sent	30/05/2019 4:26:14 PM

Frack Off!

Allan Anderson *******

NSW 2147

Anderson, Cynthia – Wednesday, 29 May 2019 – 17:01:41

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Cynthia Anderson
Sent	29/05/2019 5:01:41 PM

Dear NT Government, I urge you most strongly to reject Origin's Environmental Management Plan for a fracking exploration well. I understand that Origin's exploration well has the potential to lead to massive massive future development equivalent to 50 power stations operating for 30 years. We Australians simply cannot afford such a climate bomb. I am also concerned about the chemical impact on water sources and human health. In addition I am not convinced that Traditional Owners have been able to provide free, prior and informed consent. As a Territorian, albeit ACT, I understand the economic push, but we can do better with the NT's incredible renewables potential!

Anderson, Hiranya – Wednesday, 29 May 2019 – 09:53:04

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Hiranya Anderson
Sent	29/05/2019 9:53:04 AM

I live in Parramatta, NSW 2150 but I am affected too by this lunacy you guys-Origin are planning! How on earth can you do this guys? Go and have a look at places that have been fracked and see what has happened to the water table, the very soil there, the creatures and the very lives of people. Would you frack in your back garden?

Origin how can you guys endanger the communities and the very earth and water that we depend on with all your chemicals and destruction of the environment all for the sake of making money? Shame on you guys-surely blood will be on your hands of all the environment as well as the people and future generations that will be impacted by your greed and uncaring attitude to the destruction of the Northern Territory. Shame on you all.

Hiranya(Red bloc please) Anderson ***********
NSW 2150

Anderson, James – Monday, 27 May 2019 – 10:17:22

Subject	Objection to Origin's Kyalla frack site in the NT
From	James Anderson
Sent	27/05/2019 10:17:22 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 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, James Anderson Swan Marsh, Victoria, 3249, Australia

This email was sent by James Anderson 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 James provided an email address (*********) which we included in the REPLY-TO field.

Please reply to James Anderson at *********.

Anderson, James - Tuesday, 28 May 2019 - 22:37:35

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	James Anderson
Sent	28/05/2019 10:37:35 PM

Dear Sirs and Madams,

Please reject Origin Energy's exploration wells. We have seen permanent damage to ground water in QLD. We cannot afford to extract new fossil fuels and keep climate change under control. Making the right decisions now is critical in preserving my children's future.

James Anderson ************ WA 6159

Anderson, Jessica – Wednesday, 29 May 2019 – 11:01:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jessica Anderson
Sent	29/05/2019 11:01:14 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, Jessica Anderson Watsonia, Victoria, 3087, Australia

This email was sent by Jessica Anderson 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 Anderson at *********.

Anderson, Louise – Friday, 24 May 2019 – 09:40:50

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Louise Anderson
Sent	24/05/2019 9:40:50 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.

- 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, Louise Anderson Richmond, Victoria, 3121, Australia

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Please reply to Louise Anderson at *********.

Anderson, Lynne - Thursday, 30 May 2019 - 09:56:09

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lynne Anderson
Sent	30/05/2019 9:56:09 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.
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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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Yours sincerely, Lynne Anderson Lemon Tree Passage, New South Wales, 2319, Australia

This email was sent by Lynne Anderson 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 Anderson at *********.

Anderson, Mal – Monday, 27 May 2019 – 14:15:24

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Mal Anderson
Sent	27/05/2019 2:15:24 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.

- 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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Below are a list of my recommendations:

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Yours sincerely, Mal Anderson

This email was sent by Mal Anderson 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 Mal provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Mal Anderson at *********.

Anderson, Naomi – Friday, 24 May 2019 – 16:47:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Naomi Anderson
Sent	24/05/2019 4:47:52 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:

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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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This email was sent by naomi Anderson 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 naomi provided an email address (**********) which we included in the REPLY-TO field.

Please reply to naomi Anderson at *********.

Anderson, Naomi – Thursday, 30 May 2019 – 03:10:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Naomi Anderson
Sent	30/05/2019 3:10:13 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.

Thank you for considering my concerns.

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Please reply to naomi Anderson at *********.

Anderson, Norm - Friday, 24 May 2019 - 02:56:35

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Norm Anderson
Sent	24/05/2019 2:56:35 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.

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.

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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.

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Yours sincerely, Norm Anderson Campbelltown, South Australia, 5074, Australia

This email was sent by Norm Anderson 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 Norm provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Norm Anderson at *********.

Anderson, Robert – Thursday, 30 May 2019 – 13:44:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Robert Anderson
Sent	30/05/2019 1:44:59 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.

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Yours sincerely, Robert Anderson Alphington, Victoria, 3078, Australia

This email was sent by Robert Anderson 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 Anderson at *********.

Anderson, Vera-Anne – Saturday, 25 May 2019 – 19:20:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Vera-Anne Anderson
Sent	25/05/2019 7:20:29 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. 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, Vera-Anne Anderson

This email was sent by Vera-Anne Anderson 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-Anne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Vera-Anne Anderson at *********.

Anderson, Walter - Tuesday, 28 May 2019 - 18:29:52

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Walter Anderson
Sent	28/05/2019 6:29:52 PM

Dear NT government, It is now clear from many, unbiased sources and studies that renewable sources of energy will not only be cheaper than coal. oil and gas but will help reduce climate change and ensure our sustainable future as a species. Please do not go ahead with the proposed fracking projects in the NT - for the sake of our future and the planet.

Andjelkovic, Aleksandra – Friday, 24 May 2019 – 18:15:46

Subject	Objection to Origin's Kyalla frack site in the NT
From	Aleksandra Andjelkovic
Sent	24/05/2019 6:15:46 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, Aleksandra Andjelkovic Mullaloo, Western Australia, 6027, Australia

This email was sent by Aleksandra Andjelkovic 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 Aleksandra provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Aleksandra Andjelkovic at *********.

Andrew, Georgia - Sunday, 26 May 2019 - 01:48:23

Subject	Objection to Origin's Kyalla frack site in the NT
From	Georgia Andrew
Sent	26/05/2019 1:48:23 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, Georgia Andrew Darlington, Western Australia, 6070, Australia

This email was sent by Georgia Andrew 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 Georgia provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Georgia Andrew at *********.

Andrew, Rachel - Wednesday, 29 May 2019 - 14:08:32

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rachel Andrew
Sent	29/05/2019 2:08:32 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 love the Northern Territory and when I visited there, it made a massive impact on me. I am so disappointed that this is being considered and 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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- [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, Rachel Andrew West Hobart, Tasmania, 7000, Australia

This email was sent by Rachel Andrew 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 Rachel provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Rachel Andrew at *********.

Andrews, Celia - Thursday, 30 May 2019 - 13:28:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Celia Andrews
Sent	30/05/2019 1:28:52 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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- [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, Celia Andrews South Fremantle, Western Australia, 6162, Australia

This email was sent by Celia Andrews 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 Celia provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Celia Andrews at *********.

Andrews, Craig - Monday, 27 May 2019 - 17:18:39

Subject	Objection to Origin's Kyalla frack site in the NT
From	Craig Andrews
Sent	27/05/2019 5:18:39 PM

Dear Onshore Gas division,

As an earth scientist graduating in Geology and Geography, I need 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, Craig Andrews

This email was sent by Craig Andrews 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 Craig provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Craig Andrews at *********.

Andrews, Elizabeth - Tuesday, 28 May 2019 - 22:21:44

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Elizabeth Andrews
Sent	28/05/2019 10:21:44 PM

Please turn down Origin's application for approval of their Environmental Management Plan for an exploration well.

The risks to climate and water, if this exploration finds gas, or oil and gas, are too great. An independent inquiry into fracking in the Northern Territory found Aboriginal communities overwhelmingly opposed fracking on their land.

Yours sincerely,

Andrews, Shane - Tuesday, 28 May 2019 - 21:17:01

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Shane Andrews
Sent	28/05/2019 9:17:01 PM

Stop killing the planet!!! Tell Origin to frack off and use solar and wind hydrogen fuel cells etc instead.

shane andrews ************* VIC 3065

Ang, Hui - Thursday, 23 May 2019 - 18:24:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Hui Ang
Sent	23/05/2019 6:24:54 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.

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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, Hui Ang Kensington Gardens, South Australia, 5068, Australia

This email was sent by Hui Ang 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 Hui provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Hui Ang at *********.

Angell, JL - Friday, 24 May 2019 - 11:12:56

Subject	Objection to Origin's Kyalla frack site in the NT
From	JL Angell
Sent	24/05/2019 11:12:56 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 JL Angell 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 JL provided an email address (**********) which we included in the REPLY-TO field.

Please reply to JL Angell at *********.

Angell, JI – Wednesday, 29 May 2019 – 02:42:53

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	JI Angell
Sent	29/05/2019 2:42:53 AM

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

jl angell ************** NSW 1011

Angliss, Julie - Thursday, 23 May 2019 - 20:19:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Julie Angliss
Sent	23/05/2019 8:19:40 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

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, Julie Angliss Daylesford, Victoria, 3460, Australia

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Please reply to Julie Angliss at *********.

Annand, Trish - Monday, 27 May 2019 - 09:13:14

Subject	Objection to Origin's Kyalla frack site in the NT
From	Trish Annand
Sent	27/05/2019 9:13:14 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, Trish Annand White Rock, Queensland, 4306, Australia

This email was sent by Trish Annand 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 Trish provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Trish Annand at *********.

Annear, Anne – Wednesday, 29 May 2019 – 17:21:18

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Anne Annear
Sent	29/05/2019 5:21:18 PM

Please do not allow fracking in the NT. it will have disasterous results that will never be possible to eliminate or reverse. There can be no Environmental management for an exploration well. Water will be poisoned with chemicals which will spread to other water systems. Also, there will be huge losses of pristine country, plant and animal life, and particularly sacred sites will be damaged, causing untold grief to Native Title holders and their communities. Their futures will hang in the balance and their health compromised. Origin has no right to bring about such utter destruction to Country. I beg you not to give your approval for this damaging project.

Anne Annear ************** WA 6011

Annie, Annie – Tuesday, 28 May 2019 – 21:49:19

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Annie Annie
Sent	28/05/2019 9:49:19 PM

fracking in the NT would harm the ground water and damage the land. It releases fossil fuels that should remain in the ground to help tackle climate change. Any FIFO jobs that are created by this dangerous industry will be a threat to farming and tourism jobs. As a regular visitor to the NT with family living there the imperative to deny Origin energy the right to frack the NT is clear. Please do not allow it

Annie Annie ************* VIC 3013

Ansari, Kerryanne – Wednesday, 29 May 2019 – 11:10:08

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kerryanne Ansari
Sent	29/05/2019 11:10:08 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, kerryanne ansari Montmorency, Victoria, 3094, Australia

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Please reply to kerryanne ansari at *********.

Ansell, Nichole - Thursday, 30 May 2019 - 18:15:50

Subject	Objection to Origin's Kyalla frack site in the NT
From	Nichole Ansell
Sent	30/05/2019 6:15:50 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. I am a former environmental science laboratory Technical Officer in Aquatic Ecotoxicology for the Australian Department of Environment *********

FRACKING SUBSTANCES ARE POISON

As a former Federal government laboratory technician in aquatic ecotoxicology I must strongly object to this.

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.

That's it, this reason should be enough. It is deeply concerning

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. This cant be accepted as well planned.

Yours sincerely, Nichole Ansell Nightcliff, Northern Territory, 0810, Australia

This email was sent by Nichole Ansell 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 Nichole provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Nichole Ansell at *********.

Anstis, Ron - Sunday, 26 May 2019 - 15:20:33

Subject	Objection to Origin's Kyalla frack site in the NT
From	Ron Anstis
Sent	26/05/2019 3:20:33 PM

The Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla substrate fracturing (fracking) site in the Northern Territory.

My key concerns about this plan are outlined below.

FRACKING SUBSTANCES ARE POISONOUS.

The fracking chemicals which Origin plans to use are harmful to health. There are some 'trade name' fracking chemicals that do not have any health data available. However, an independent review of the substances shows that they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer whilst some are very toxic to aquatic life and have long lasting effects.

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 contains a lot 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, including the Gouldian finch and thus should never be open and accessible to birdlife.

WET SEASON RISKS WITH WASTE ON SITE

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

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

TRANSPORT RISKS AND TOURISM IMPACTS

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

In addition, Origin want to dump the toxic waste at an undetermined site in Queensland, a state which already has millions of tonnes of toxic salt waste for which there is no permanent disposal solution. 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. Whilst Origin must be made to stop all flaring on total fire ban days, the risk would not exist at all if the fracking was banned in the first place.

Whilst I was an Origin customer, the willingness of the company to disregard the environment in the "rush for cash" and their previous refusal to answer letters of environmental concern has forced me to change suppliers and ease my conscience somewhat.

Please consider my concerns.

Yours sincerely, Ron Anstis Carlisle River, Victoria, 3239, Australia

This email was sent by Ron Anstis 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 Ron provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ron Anstis at *********.

Antares, Michael – Wednesday, 29 May 2019 – 12:56:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Michael Antares
Sent	29/05/2019 12:56:52 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.

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, Michael Antares Zetland, New South Wales, 2017, Australia

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Please reply to Michael Antares at *********.

Antasuda, Sue - Tuesday, 28 May 2019 - 19:50:42

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Sue Antasuda
Sent	28/05/2019 7:50:42 PM

Origin want to already take SHORTCUTS to store millions of litres of water poisoned with fracking chemicals in open ponds, exposed to extreme weather and putting the local environment at risk with toxic waste. This is despite the Northern Territory government's own fracking inquiry recommending the use of closed tanks for all fracking operations.

The Northern Territory government has the power to reject this exploration well and stop this project.

I am URGENTLY ASKING you not to approve Origin's environmental management plan for their drilling well?

If Origin finds gas, or even oil, this would be the beginning of Australia's first industrial shale gas fields. And if the Northern Territory's gas is drilled and burned, the carbon emissions would equal fifty new coal fired power stations. It's a carbon bomb that we simply can't afford.

I strenuously object to this on climate and environmental grounds.

The NT must never be fracked

Explore renewable energy options instead. The CSIRO, BZE and others have already shown how Australia's North could be a RENEWABLE POWERHOUSE FOREVER-exporting electricy and or hydrogen in the form of ammonia to renewable clean power hungry Asian economies seeking to reduce insufferable pollution and its health costs and meet their Paris agreements

The way forward is NOT fossil fuels-we have 12 years to reduce them dramatically and we cant afford to spend money and national effort still developing fossil fuels which may well become stranded while other countries and states have forged forward and grabbed markets DO NOT ALLOW FRACKING in the NT!!!!

Thank you

Sue

Sue Antasuda

VIC 3072

Apelt, Rachel – Wednesday, 29 May 2019 – 22:27:18

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rachel Apelt
Sent	29/05/2019 10:27:18 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.
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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
- [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
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Yours sincerely, Rachel Apelt Arana Hills, Queensland, 4054, Australia

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Please reply to Rachel Apelt at *********.

Apolo, G - Thursday, 23 May 2019 - 19:09:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	G Apolo
Sent	23/05/2019 7:09:31 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.

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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Please reply to G Apolo at *********.

Appel, Alice - Thursday, 23 May 2019 - 19:17:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Alice Appel
Sent	23/05/2019 7:17:49 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 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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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, Alice Appel Five Dock, New South Wales, 2046, Australia

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Please reply to Alice Appel at *********.

Appleby, Bron - Thursday, 30 May 2019 - 16:23:00

Subject	Objection to Origin's Kyalla frack site in the NT
From	Bron Appleby
Sent	30/05/2019 4:23:00 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, Bron Appleby Clifton Beach, Queensland, 4879, Australia

This email was sent by Bron Appleby 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 Bron provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Bron Appleby at *********.

Appo, Cameron – Wednesday, 29 May 2019 – 12:47:07

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cameron Appo
Sent	29/05/2019 12:47:07 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.
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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, Cameron Appo Nerang, Queensland, 4211, Australia

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Please reply to Cameron Appo at *********.

Apthorpe, Marjorie - Friday, 24 May 2019 - 18:38:25

Subject	Objection to Origin's Kyalla frack site in the NT
From	Marjorie Apthorpe
Sent	24/05/2019 6:38:25 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 liquids.

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 birdlife that visits the site, including the threatened Gouldian Finch, and these pits and tanks 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.

In addition, Origin want to dump their waste 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, Marjorie Apthorpe Batemans Bay, New South Wales, 2536, Australia

This email was sent by Marjorie Apthorpe 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 Marjorie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Marjorie Apthorpe at *********.

Ara, Morgan - Friday, 24 May 2019 - 05:25:20

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Morgan Ara
Sent	24/05/2019 5:25:20 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.

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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- 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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- 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, Morgan Ara North Turramurra, New South Wales, 2074, Australia

This email was sent by Morgan Ara 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 Morgan provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Morgan Ara at *********.

Aram, Pierrot – Friday, 24 May 2019 – 11:14:18

Subject	Objection to Origin's Kyalla frack site in the NT
From	Pierrot Aram
Sent	24/05/2019 11:14:18 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, Pierrot Aram Devon Meadows, Victoria, 3977, Australia

This email was sent by Pierrot Aram 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 Pierrot provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Pierrot Aram at *********.

Aranguiz, Claudio - Saturday, 25 May 2019 - 02:35:46

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Claudio Aranguiz
Sent	25/05/2019 2:35:46 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

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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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, Claudio Aranguiz Turner, Australian Capital Territory, 2612, Australia

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Please reply to Claudio Aranguiz at *********.

Arbon, Veronica – Wednesday, 29 May 2019 – 14:26:28

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Veronica Arbon
Sent	29/05/2019 2:26:28 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.
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Yours sincerely, Veronica Arbon

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Please reply to Veronica Arbon at *********.

Archer, Cath – Wednesday, 29 May 2019 – 11:22:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cath Archer
Sent	29/05/2019 11:22:05 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

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Yours sincerely, Cath Archer Yungaburra, Queensland, 4884, Australia

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Please reply to Cath Archer at *********.

Archibald, Josephine – Wednesday, 29 May 2019 – 11:30:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Josephine Archibald
Sent	29/05/2019 11:30:25 AM

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

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Yours sincerely, Josephine Archibald Cottesloe, Western Australia, 6011, Australia

This email was sent by Josephine Archibald 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 Archibald at *********.

ARCHIBALD', NADINE - Saturday, 25 May 2019 - 20:48:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	NADINE ARCHIBALD'
Sent	25/05/2019 8:48:43 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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This email was sent by NADINE ARCHIBALD` 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 NADINE provided an email address (*********) which we included in the REPLY-TO field.

Please reply to NADINE ARCHIBALD' at *********.

Are, Selina – Thursday, 30 May 2019 – 11:43:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Selina Te Are
Sent	30/05/2019 11:43:17 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

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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, Selina Are Keysborough, Victoria, 3173, Australia

This email was sent by Selina Te Are 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 Selina provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Selina Te Are at **********.

Arley, Shae – Saturday, 25 May 2019 – 12:37:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Shae Arley
Sent	25/05/2019 12:37:19 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

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
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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, shae arley East Brisbane, Queensland, 4169, Australia

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Please reply to shae arley at *********.

Armstrong, Elspeth - Friday, 24 May 2019 - 12:53:19

Subject	Objection to Origin's Kyalla frack site in the NT
From	Elspeth Armstrong
Sent	24/05/2019 12:53:19 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, elspeth armstrong Soldiers Point, New South Wales, 2317, Australia

This email was sent by elspeth armstrong 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 elspeth provided an email address (*********) which we included in the REPLY-TO field.

Please reply to elspeth armstrong at *********.

Armstrong, Jeanette – Wednesday, 29 May 2019 – 11:08:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jeanette Armstrong
Sent	29/05/2019 11:08:11 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.

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, Jeanette Armstrong Pimlico, Queensland, 4812, Australia

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Please reply to Jeanette Armstrong at *********.

Armstrong, Keith - Friday, 24 May 2019 - 15:50:24

Subject	Objection to Origin's Kyalla frack site in the NT
From	Keith Armstrong
Sent	24/05/2019 3:50:24 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.

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, Keith Armstrong Arana Hills, Queensland, 4054, Australia

This email was sent by Keith Armstrong 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 Keith provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Keith Armstrong at *********.

Armstrong, Keith – Saturday, 25 May 2019 – 13:44:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Keith Armstrong
Sent	25/05/2019 1:44:52 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.

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/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Keith Armstrong

This email was sent by Keith Armstrong 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 Keith provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Keith Armstrong at *********.

Armstrong, Mike – Saturday, 25 May 2019 – 12:39:25

Subject	Objection to Origin's Kyalla frack site in the NT
From	Mike Armstrong
Sent	25/05/2019 12:39:25 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, Mike Armstrong Southampton, Western Australia, 6253, Australia

This email was sent by Mike Armstrong 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 Mike provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Mike Armstrong at *********.

Armstrong, Murray – Sunday, 26 May 2019 – 06:53:59

Subject	Objection to Origin's Kyalla frack site in the NT
From	Murray Armstrong
Sent	26/05/2019 6:53:59 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, Murray Armstrong New South Wales, 2337, Australia

This email was sent by Murray Armstrong 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 Murray provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Murray Armstrong at *********.

Armstrong-Mcdonald, Ros – Friday, 24 May 2019 – 11:04:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ros Armstrong-Mcdonald
Sent	24/05/2019 11:04:33 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

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, Ros Armstrong-McDonald

This email was sent by Ros Armstrong-McDonald 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 Ros provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ros Armstrong-McDonald at *********.

Arnaud, Louise - Thursday, 30 May 2019 - 11:18:44

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Louise Arnaud
Sent	30/05/2019 11:18:44 AM

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.

he 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.

Arnold, Jade – Wednesday, 29 May 2019 – 10:55:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jade Arnold
Sent	29/05/2019 10:55:52 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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- [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, Jade Arnold Lambton, New South Wales, 2299, Australia

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Please reply to Jade Arnold at *********.

Arnold, Mary - Monday, 27 May 2019 - 14:18:56

Subject	Don't allow Origin's Kyalla frack site in the NT
From	Mary Arnold
Sent	27/05/2019 2:18:56 PM

Dear Onshore Gas division,

As someone who is deeply concerned about our environmental management in this country I am writing to express my strong 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 Arnold Dunlop, Australian Capital Territory, 2615, Australia

This email was sent by Mary Arnold 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 Arnold at *********.

Arnold, Steven – Wednesday, 29 May 2019 – 11:04:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Steven Arnold
Sent	29/05/2019 11:04:49 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.

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, Steven Arnold Bardon, Queensland, 4065, Australia

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Please reply to Steven Arnold at *********.

Arnold, Trudie - Monday, 27 May 2019 - 09:24:56

Subject	Objection to Origin's Kyalla frack site in the NT
From	Trudie Arnold
Sent	27/05/2019 9:24:56 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, Trudie Arnold

This email was sent by Trudie Arnold 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 Trudie provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Trudie Arnold at *********.

Aroney, Heidi - Friday, 24 May 2019 - 16:53:46

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Heidi Aroney
Sent	24/05/2019 4:53:46 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
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Yours sincerely, Heidi Aroney

This email was sent by Heidi Aroney 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 Heidi provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Heidi Aroney at *********.

Arquilla, Vance – Saturday, 25 May 2019 – 01:24:15

Subject	Objection to Origin's Kyalla frack site in the NT
From	Vance Arquilla
Sent	25/05/2019 1:24:15 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, vance arquilla Los Angeles, California, 90066, United States

This email was sent by vance arquilla 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 vance provided an email address (**********) which we included in the REPLY-TO field.

Please reply to vance arquilla at *********.

Arra, Getxo - Wednesday, 29 May 2019 - 20:10:32

Subject	XR: Objection to Origin Energy's Environmental Management Plan for the Kyalla
_	Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Getxo Arra
Sent	29/05/2019 8:10:32 PM

Don't frack the NT or be prepared to massive, coordinated, non-violent civil disobedience. Extinction Rebellion Australia will be coming for Origin and all of your interests.

Getxo Arra ********

Arranz, Maria – Friday, 24 May 2019 – 21:36:01

Subject	Objection to Origin's Kyalla frack site in the NT
From	Maria Arranz
Sent	24/05/2019 9:36:01 PM

I write 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 are:

1. The fracking chemicals Origin plans to use are harmful to life. 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 organisms with long lasting effects.

In addition, there are 'trade name' fracking chemicals that do not have any health data available which could be toxic.

2. 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 toxic substances like heavy metals, fracking chemicals and naturally occurring radioactive materials.

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

3. It is alarming 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.

4. 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.

Origin also wants 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.

5. 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, Maria Arranz Faulconbridge, New South Wales, 2776, Australia This email was sent by Maria Arranz 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 Arranz at *********.

Arteaga, Oscar – Friday, 24 May 2019 – 19:17:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Oscar Arteaga
Sent	24/05/2019 7:17:13 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

This email was sent by Oscar Arteaga 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 Oscar provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Oscar Arteaga at *********.

Arthur, Alex – Wednesday, 29 May 2019 – 15:31:27

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Alex Arthur
Sent	29/05/2019 3:31:27 PM

Fracking is possibly the stupidest experiment that human kind has ever undertaken. It is water intensive polluting and the wells have been shown to regularly fail after they have been capped, releasing large amounts of methane into the atmosphere. The long term effects of fracking on aquifers is no where near being well understood and it provides little in the way of enployment. The only winner (all be it short term) is the company extracting the gas. The community and the environment suffer in the long run. I object in the strongest possible terms to this project.

Alex Arthur ************** NSW 2026

Arunagiri, Apeetha – Saturday, 25 May 2019 – 08:52:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Apeetha Arunagiri
Sent	25/05/2019 8:52:36 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.

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

This email was sent by Apeetha Arunagiri 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 Apeetha provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Apeetha Arunagiri at *********.

Arundell, Clare – Wednesday, 29 May 2019 – 11:07:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Clare Arundell
Sent	29/05/2019 11:07:13 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.

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

This email was sent by Clare Arundell 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 Clare provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Clare Arundell at *********.

Aschmann, Jeff – Thursday, 30 May 2019 – 07:59:49

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jeff Aschmann
Sent	30/05/2019 7:59:49 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, Jeff Aschmann Broulee, New South Wales, 2537, Australia

This email was sent by Jeff Aschmann 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 Jeff provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jeff Aschmann at *********.

Ashby, Frances – Wednesday, 29 May 2019 – 16:41:17

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Frances Ashby
Sent	29/05/2019 4:41:17 PM

I ask that you deny Origin the right to frack in the NT. The welfare of your beautiful territory is being attacked in so many areas, and our first people should not have their land rights treated with disdain by companies which ignore the future well-being of both the land and its people. Write your submission here - use our talking points to guide your submission.

Ashman, Lauren – Wednesday, 29 May 2019 – 09:55:02

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Lauren Ashman
Sent	29/05/2019 9:55:02 AM

To whom it may concern,

I strongly object to Origin Energy's fracking project. We are facing a climate crisis, with the future of our planet depending on us switching to using more renewable energy sources - this is no time to open up hundreds of gas wells and poison the environment with toxic chemicals. Origin has already ignored the government's recommendations to use closed water tanks to store waste. They are ignoring the Traditional Owners of the lands involved, who strongly oppose the planned fracking. There needs to be stricter rules in place if this project is to go ahead, if at all.

Sincerely, Lauren Ashman

Lauren Ashman ********

ACT 2600

Ashmore, Suzanne – Saturday, 25 May 2019 – 23:36:19

Subject	Objection to Origin's Kyalla frack site in the NT
From	Suzanne Ashmore
Sent	25/05/2019 11:36:19 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, Suzanne Ashmore Bassendean, Western Australia, 6054, Australia

This email was sent by Suzanne Ashmore 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 Suzanne provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Suzanne Ashmore at *********.

Ashton, Daniel - Sunday, 26 May 2019 - 06:49:41

Subject	Objection to Origin's Kyalla frack site in the NT
From	Daniel Ashton
Sent	26/05/2019 6:49:41 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, Daniel Ashton Tweed Heads West, New South Wales, 2485, Australia

This email was sent by Daniel Ashton 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 Ashton at *********.

Ashton, Megan – Tuesday, 28 May 2019 – 11:49:57

Subject	Objection to Origin's Kyalla frack site in the NT
From	Megan Ashton
Sent	28/05/2019 11:49:57 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, Megan Ashton Nightcliff, Northern Territory, 0810, Australia

This email was sent by Megan Ashton 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 Megan provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Megan Ashton at *********.

Ashton, Sarah - Sunday, 26 May 2019 - 09:50:55

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sarah Ashton
Sent	26/05/2019 9:50:55 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. I am currently an Origin customer, but I would 100% change providers if you go ahead with this plan.

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 Ashton Mitchelton, Queensland, 4053, Australia

This email was sent by Sarah Ashton 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 Ashton at *********.

Ashton-Smith, Elissa – Thursday, 23 May 2019 – 18:33:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elissa Ashton-Smith
Sent	23/05/2019 6:33:13 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, Elissa Ashton-Smith Point Lonsdale, Victoria, 3225, Australia

This email was sent by Elissa Ashton-Smith 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 Elissa provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Elissa Ashton-Smith at *********.

Ashwin, Robyn - Monday, 27 May 2019 - 08:57:56

Subject	Objection to Origin's Kyalla frack site in the NT
From	Robyn Ashwin
Sent	27/05/2019 8:57:56 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, Robyn Ashwin Tamborine Mountain, Queensland, 4272, Australia

This email was sent by Robyn Ashwin 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 Robyn provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Robyn Ashwin at *********.

Asplin, Jennifer - Monday, 27 May 2019 - 09:50:03

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jennifer Asplin
Sent	27/05/2019 9:50:03 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, jennifer asplin New South Wales, 2540, Australia

This email was sent by jennifer asplin 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 jennifer provided an email address (**********) which we included in the REPLY-TO field.

Please reply to jennifer asplin at *********.

Astridge, Georgia – Tuesday, 28 May 2019 – 13:11:34

Subject	Objection to Origin's Kyalla frack site in the NT
From	Georgia Astridge
Sent	28/05/2019 1:11:34 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 offering 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, Georgia Astridge White Gums, Northern Territory, 0870, Australia

This email was sent by Georgia Astridge 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 Georgia provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Georgia Astridge at *********.

Athanasos, Deanna – Wednesday, 29 May 2019 – 17:27:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Deanna Athanasos
Sent	29/05/2019 5:27:17 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/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Deanna Athanasos Westbourne Park, South Australia, 5041, Australia

This email was sent by Deanna Athanasos 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 Deanna provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Deanna Athanasos at *********.

Atherton, Peter - Thursday, 23 May 2019 - 18:09:18

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Peter Atherton
Sent	23/05/2019 6:09:18 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.

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.

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.

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.

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.

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.

Fracking should not be allowed as the NT has enough solar energy to power the planet sustainably and should be developed as the preferred energy source, not fracking.

Yours sincerely, Peter Atherton Seven Hills, Queensland, 4170, Australia

This email was sent by Peter Atherton 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 Atherton at *********.

Atherton, Peter - Monday, 27 May 2019 - 20:05:21

Subject	Objection to Origin's Kyalla frack site in the NT
From	Peter Atherton
Sent	27/05/2019 8:05:21 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.

Apart from key concerns with this plan as outlined below fracking as you know is an environmental disaster and should not be happening in this time of:

climate crisis

water crisis

extinction crisis

rising sea levels wiping out islands and coastal fringes destruction of Great Barrier Reef with sea level warming

ice caps and glaciers melting

the list goes on and on

What makes it so insane to frack is that more energy can be harvested from the sun exactly where you plan to frack, in the middle of the worlds biggest solar hotspot!

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 and just give it up and harvest solar on your fracking area!

Yours sincerely, Peter Atherton Cannon Hill, Queensland, 4170, Australia

This email was sent by Peter Atherton 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 Atherton at *********.

Athiende, Pam - Friday, 24 May 2019 - 18:30:16

Subject	Objection to Origin's Kyalla frack site in the NT
From	Pam Athiende
Sent	24/05/2019 6:30:16 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.

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, Pam Athiende Clontarf, Queensland, 4019, Australia

This email was sent by Pam Athiende 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 Pam provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Pam Athiende at *********.

Atkins, Pam - Thursday, 23 May 2019 - 18:18:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Pam Atkins
Sent	23/05/2019 6:18:45 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.

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, Pam Atkins Ballarat East, Victoria, 3350, Australia

This email was sent by Pam Atkins 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 Pam provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Pam Atkins at *********.

Atkins, Pixiecap – Wednesday, 29 May 2019 – 06:03:42

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Pixiecap Atkins
Sent	29/05/2019 6:03:42 AM

Please do not give Origin approval of their Environmental Management Plan for an exploration well.

If Origin finds gas, or even oil, this would be the beginning of Australia's first industrial shale gas fields. And if the Northern Territory's gas is drilled and burned, the carbon emissions would equal fifty new coal fired power stations. It's a carbon bomb that we simply can't afford.

An independent enquiry has found that Aboriginal communities overwhelmingly oppose fracking of their land. Unfortunately Origin is not listening to and respecting these views and is pushing ahead with devastating fracking plans.

I, as an Australian citizen, also oppose fracking of Australian land. Fracking may give economic gain short term but in the long term, the devastation and irrepairable damage to the environment and people's health will cost more and is more important.

Please decline any submission Origin makes to test and explore fracking in the N.T.. Our country and it's people deserve to be heard, respected and cared for.

Pixiecap Atkins

VIC 3020

Atkinson, Helen – Sunday, 26 May 2019 – 11:09:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Atkinson
Sent	26/05/2019 11:09:03 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.

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Yours sincerely, Helen Atkinson Redlynch, Queensland, 4870, Australia

This email was sent by Helen Atkinson 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 Atkinson at *********.

Atkinson, Stephen – Friday, 24 May 2019 – 08:37:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Stephen Atkinson
Sent	24/05/2019 8:37:19 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:

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Yours sincerely, Stephen Atkinson Mittagong, New South Wales, 2575, Australia

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Please reply to Stephen Atkinson at *********.

Attard, Dominic - Thursday, 30 May 2019 - 07:23:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Dominic Attard
Sent	30/05/2019 7:23:37 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

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

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Yours sincerely, Dominic Attard Broadmeadow, New South Wales, 2292, Australia

This email was sent by Dominic Attard 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 Dominic provided an email address (*********) which we included in the REPLY-TO field.

Please reply to Dominic Attard at *********.

Attwell, Christina – Thursday, 30 May 2019 – 14:09:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Christina Attwell
Sent	30/05/2019 2:09:37 PM

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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, Christina Attwell Tea Tree Gully, South Australia, 5091, Australia

This email was sent by Christina Attwell 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 Christina provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Christina Attwell at *********.

Attwood, John – Monday, 27 May 2019 – 09:21:49

Subject	Objection to Origin's Kyalla frack site in the NT
From	John Attwood
Sent	27/05/2019 9:21:49 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 poisonous chemical compounds, 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 Attwood New South Wales, 2340, Australia

This email was sent by John Attwood 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 Attwood at *********.

Auburn, Penny - Thursday, 30 May 2019 - 10:44:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Penny Auburn
Sent	30/05/2019 10:44:49 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. We need to protect the land, water, health and wellbeing of impacted communities and we need to consider the future impacts this kind of mining has on our country's clean water supplies and the effects of 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. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to further climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing dramatic changes in the weather, and is predicted to be one of the most severely impacted by climate change 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.
- 3. Storage of wastewater in open air tanks poses unacceptable risks to health of the community and the environment 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] Nowadays 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. 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].
- 4. 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.

5. There are some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. The use of these dangerous chemicals has not been properly assessed. They pose huge risks to the environment, water and community health which is exacerbated by the use of the open storage tanks. 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. . 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.
- 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. 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.

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, Penny Auburn Newport, New South Wales, 2106, Australia

This email was sent by Penny Auburn 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 Penny provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Penny Auburn at *********.

Audley, Cathryn - Tuesday, 28 May 2019 - 18:18:24

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
-	and Hydraulic Fracturing 2019 Program EP117 N2
From	Cathryn Audley
Sent	28/05/2019 6:18:24 PM

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

Cathryn Audley *********
VIC 3073

Audsley, Daniel – Tuesday, 28 May 2019 – 18:58:37

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Daniel Audsley
Sent	28/05/2019 6:58:37 PM

Through all the threats it does to water, and the environment, I believe shale gas and or Fracking oil are really there to make up for the shrinking yearly supplies of crude oil. However when they are only a short term minning system we really need to leave it because it is not a solution for crude oil. There should never be any drilling for fracking oil on this continent as it is to happen because Australia is to dry.

Daniel Audsley

NSW 2454

Austen-Paine, Rebecca – Wednesday, 29 May 2019 – 12:15:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rebecca Austen-Paine
Sent	29/05/2019 12:15:33 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 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, Rebecca Austen-Paine

This email was sent by Rebecca Austen-Paine 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 Austen-Paine at *********.

Austin, Amanda – Monday, 27 May 2019 – 10:51:57

Subject	Objection to Origin's Kyalla frack site in the NT
From	Amanda Austin
Sent	27/05/2019 10:51:57 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, Amanda Austin Kilgariff, Northern Territory, 0873, Australia

This email was sent by Amanda Austin 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 Amanda provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Amanda Austin at *********.

Austin, Tim – Monday, 27 May 2019 – 10:34:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Tim Austin
Sent	27/05/2019 10:34:17 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.

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, Tim Austin Hackett, Australian Capital Territory, 2602, Australia

This email was sent by Tim Austin 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 Austin at *********.

Austin, William - Saturday, 25 May 2019 - 04:54:19

Subject	Objection to Origin's Kyalla frack site in the NT
From	William Austin
Sent	25/05/2019 4:54:19 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, william austin Redcliffe, Queensland, 4020, Australia

This email was sent by william austin 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 william provided an email address (**********) which we included in the REPLY-TO field.

Please reply to william austin at *********.

Avery, Ian - Friday, 24 May 2019 - 15:54:05

Subject	Objection to Origin's Kyalla frack site in the NT
From	lan Avery
Sent	24/05/2019 3:54:05 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, Ian Avery Peakhurst DC, New South Wales, 2210, Australia

This email was sent by Ian Avery 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 Ian provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ian Avery at *********.

Avila, Ian - Friday, 24 May 2019 - 13:50:27

Subject	Objection to Origin's Kyalla frack site in the NT
From	Ian Avila
Sent	24/05/2019 1:50:27 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.

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, Ian Avila Booyong, New South Wales, 2480, Australia

This email was sent by Ian Avila 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 Ian provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Ian Avila at *********.

Avila, Jacob – Saturday, 25 May 2019 – 12:10:30

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jacob Avila
Sent	25/05/2019 12:10:30 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, Jacob Avila Minnie Water, New South Wales, 2462, Australia

This email was sent by Jacob Avila 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 Jacob provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Jacob Avila at *********.

Axford, Susan - Monday, 27 May 2019 - 07:12:04

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Susan Axford
Sent	27/05/2019 7:12:04 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

Fracking is not a good science. Irreparable damage to subterranean water systems and subsequent damage to the whole ecosystem can result from this practice. Please reconsider any plans to enable Origin Energy to frack anywhere in the Northen Territory

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/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Susan Axford

This email was sent by Susan Axford 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 Axford at *********.

Axon, Christine – Wednesday, 29 May 2019 – 09:59:07

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Christine Axon
Sent	29/05/2019 9:59:07 AM

Fracking will destroy water catchments which in turn will kill everything that depends on it including You and your family not to mention the countless other people and plants and fauna. there is no turning back please keep the N.T. frack free for the sake of life itself please u never know when we may need it after we've destroyed everything else. Please keep the N.T. frack free

christine axon

WA 6173

Ayres, Avinash – Friday, 24 May 2019 – 09:46:20

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Avinash Ayres
Sent	24/05/2019 9:46:20 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.

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.

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Yours sincerely, Avinash Ayres South Lismore, New South Wales, 2480, Australia

This email was sent by Avinash Ayres 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 Avinash provided an email address (**********) which we included in the REPLY-TO field.

Please reply to Avinash Ayres at *********.

Ayton, Debbie - Saturday, 25 May 2019 - 09:51:01

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Debbie Ayton
Sent	25/05/2019 9:51:01 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.

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Yours sincerely, Debbie Ayton Mount Low, Queensland, 4818, Australia

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Please reply to Debbie Ayton at *********.