# T, Cammo – Monday, 27 May 2019 – 11:10:46

Subject	Objection to Origin's Kyalla frack site in the NT
From	Cammo T
Sent	27/05/2019 11:10:46 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, Cammo T Hurstbridge, Victoria, 3099, Australia

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

Please reply to Cammo T at \*\*\*\*\*\*\*\*\*.

# T, Gissu - Thursday, 30 May 2019 - 08:50:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gissu T
Sent	30/05/2019 8:50:31 AM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Gissu T Oxley, Queensland, 4075, Australia

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Please reply to Gissu T at \*\*\*\*\*\*\*\*\*\*.

# T, Kab – Thursday, 30 May 2019 – 12:44:20

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kab T
Sent	30/05/2019 12:44:20 PM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Kab T

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Please reply to Kab T at \*\*\*\*\*\*\*\*\*.

# T, Nelly - Tuesday, 28 May 2019 - 18:52:46

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Nelly T
Sent	28/05/2019 6:52:46 PM

I strongly object to this project and don't believe it should go ahead, I even notified Origin's that if they proceeded that I would close my electrify account.

Which I have followed through with.

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.

### 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.

### T, X – Wednesday, 29 May 2019 – 15:12:50

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	XT
Sent	29/05/2019 3:12:50 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.

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/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Xavier T

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Please reply to X T at \*\*\*\*\*\*\*\*\*.

# Tabb, Jennine – Tuesday, 28 May 2019 – 15:59:49

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jennine Tabb
Sent	28/05/2019 3:59:49 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, Jennine Tabb Chidlow, Western Australia, 6556, Australia

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

Please reply to Jennine Tabb at \*\*\*\*\*\*\*\*\*.

# Tabor, Derek - Saturday, 25 May 2019 - 21:49:51

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Derek Tabor
Sent	25/05/2019 9:49:51 PM

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

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

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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- [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, Derek Tabor Wallagoot, New South Wales, 2550, Australia

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Please reply to Derek Tabor at \*\*\*\*\*\*\*\*\*.

# Tainsh, Bianca – Saturday, 25 May 2019 – 22:03:06

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bianca Tainsh
Sent	25/05/2019 10:03:06 PM

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

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

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

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

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

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Please reply to Bianca Tainsh at \*\*\*\*\*\*\*\*\*.

# Tait, Rodney - Wednesday, 29 May 2019 - 07:26:28

Subject	Tell the NT government to reject Origin's fracking well
From	Rodney Tait
Sent	29/05/2019 7:26:28 AM

An independent inquiry into fracking in the Northern Territory found Aboriginal communities overwhelmingly opposed fracking on their land. Fracking is not safe for the environment.

# Talbert, Lucia – Wednesday, 29 May 2019 – 14:22:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lucia Talbert
Sent	29/05/2019 2:22:37 PM

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

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

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

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

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

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

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 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, Lucia Talbert Manly, New South Wales, 2095, Australia

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Please reply to Lucia Talbert at \*\*\*\*\*\*\*\*\*.

# Talbot, Robyn – Thursday, 30 May 2019 – 10:33:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Robyn Talbot
Sent	30/05/2019 10:33:15 AM

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

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

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

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

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

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Below are a list of my recommendations:

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

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

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Yours sincerely, Robyn Talbot Mulgrave, Victoria, 3170, Australia

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Please reply to Robyn Talbot at \*\*\*\*\*\*\*\*\*\*.

# Taleb, Aref – Thursday, 30 May 2019 – 07:50:49

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Aref Taleb
Sent	30/05/2019 7:50:49 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.

- 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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- 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, Aref Taleb Beverley Park, New South Wales, 2217, Australia

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Please reply to Aref Taleb at \*\*\*\*\*\*\*\*\*.

# Tanneberger, Martin – Saturday, 25 May 2019 – 16:37:53

Subject	Objection to Origin's Kyalla frack site in the NT
From	Martin Tanneberger
Sent	25/05/2019 4:37:53 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, Martin Tanneberger Recherche, Tasmania, 7109, Australia

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Please reply to Martin Tanneberger at \*\*\*\*\*\*\*\*\*.

# Tanner, Ash – Wednesday, 29 May 2019 – 14:51:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ash Tanner
Sent	29/05/2019 2:51:36 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.

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

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

Below are a list of my recommendations:

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

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

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- [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, Ash Tanner North Bendigo, Victoria, 3550, Australia

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

Please reply to Ash Tanner at \*\*\*\*\*\*\*\*\*.

## Tanner, Ian - Sunday, 26 May 2019 - 16:53:51

Subject	Objection to Origin's Kyalla frack site in the NT
From	lan Tanner
Sent	26/05/2019 4:53:51 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.

I see that fracking in Queensland has horrified NSW people to reject fracking there and elsewhere. The reports from the USA of depressed property values, water and air pollution damage make fracking anywhere the wrong choice to obtain gas.

Thank you for considering my concerns.

Yours sincerely, Ian Tanner Chatswood, New South Wales, 2067, Australia

This email was sent by Ian Tanner via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tanner at \*\*\*\*\*\*\*\*\*.

## Tanner, Linda – Friday, 24 May 2019 – 13:00:58

Subject	Objection to the environmental cost of Origin's Kyalla frack site in the NT
From	Linda Tanner
Sent	24/05/2019 1:00:58 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. The proposed plan poses unacceptable risks to humans, wildlife and the environment from the use and open storage of toxic chemicals. Given that there is little or no research data on the chemicals involved or the process of mixing them, I am greatly concerned about the safety of allowing open evaporation pits.

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. I would appreciate a response to my concerns.

Yours sincerely, Linda Tanner

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

Please reply to Linda Tanner at \*\*\*\*\*\*\*\*\*\*.

## Tanner, Nigel – Tuesday, 28 May 2019 – 22:27:22

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Nigel Tanner
Sent	28/05/2019 10:27:22 PM

Please show some decency. Don't turn traditional lands (held over 60,00 years sustainably) into waste, polluted land. Please don't contribute to global warming if you have any consideration for future generations.

## Tansley, Susan – Friday, 24 May 2019 – 22:47:41

Subject	Objection to Origin's Kyalla frack site in the NT
From	Susan Tansley
Sent	24/05/2019 10:47:41 PM

## Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

## OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

## WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

This email was sent by susan tansley via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 tansley at \*\*\*\*\*\*\*\*\*.

## Tapia, Krystal – Thursday, 30 May 2019 – 10:30:47

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Krystal Tapia
Sent	30/05/2019 10:30:47 AM

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

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

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

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

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

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

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, Krystal Tapia

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

Please reply to Krystal Tapia at \*\*\*\*\*\*\*\*\*.

## Tapley, Madeleine – Friday, 24 May 2019 – 09:31:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Madeleine Tapley
Sent	24/05/2019 9:31:59 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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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

Yours sincerely, Madeleine Tapley Hallett Cove, South Australia, 5158, Australia

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

Please reply to Madeleine Tapley at \*\*\*\*\*\*\*\*\*.

## Taplin, Helen – Thursday, 23 May 2019 – 19:24:09

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Taplin
Sent	23/05/2019 7:24:09 PM

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

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

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. 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.
- 2. 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.
- 3. 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.
- 4. 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.

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, Helen Taplin Bayswater, Western Australia, 6053, Australia

This email was sent by Helen Taplin via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Taplin at \*\*\*\*\*\*\*\*\*.

## Tapp, Caroline – Thursday, 30 May 2019 – 11:24:19

Subject	Objection to Origin and Origin's Kyalla frack site EMP in the NT
From	Caroline Water Protector Tapp
Sent	30/05/2019 11:24:19 AM

Dear Onshore Gas division

Att: Eva Lawler and David Ritchie-rich and Justice Pepper

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

Some of 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.

https://www.psr.org/blog/resource/compendium-of-scientific-medical-and-media-finding s-demonstrating-risks-and-harms-of-fracking/?fbclid=IwAR0lxqp3zMza99-lineary.pdf.

PGIDsYrGmQYdHfX-HiyCjznNhYomFi4Qa9KhLLf9BXCs

Plus, superstitiously, 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, open winds, 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.

All that "invisible stuff" doesn't just disappear in to nothing. It all either goes into the winds to be dispersed all over the flat or in to the soils with the h2o molecules.

#### WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing (neuro) toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, lizards, small mammals, important insects etc but extreme weather events, for which Outback is well renowned, would likely cause downstream pollution impacts and evaporation chemicals and compounds floating through the air and surrounds in immediate and further ecosystems and farming, bushtucker and native inter-species food chains.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking. Clearly Origin is intend on using Lake Woods as a anti science cost-saving flushing disposal mechanism straight into the environment and

rural produce industry during the rain and flooding season in this volatile area of water supplies including ground water soaks and creek tributaries.

SERIOUSLY how the fk does this meet the Inq recommendations or either any semblance of "world's best practice" and science in any language.

## TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators and beef trucking 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 and completely outrageous.

## WILDFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is rampant mostly uncontrolled bushfire area ecologically, including habitat 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. There have also been reports from cattle stations like Newcastle Waters where fires burn without any control and the impact immensity can be seen by satellite pictures (google it).

#### **ORIGIN**

In fact, given Origin's disgraceful mining and production record in Australia I'm perplexed to even understand how this corporate vandal can be allowed to operate in the NT given it's public record area not to mention it's tax haven status and "rent seeker" MO.:-https://www.google.com/search?client=firefox-b-d&q=Origin+fined

https://www.michaelwest.com.au/tag/origin-energy/

https://www.michaelwest.com.au/revolving-doors/ https://www.facebook.com/1873844249513572/photos/a.1891392171092113/2348775818687077/?type=3&:

And can remind you all bout the recommendations Inq here https://frackinginquiry.nt.gov.au/inquiry-reports/final-report BECAUSE it appears that already NTG / Ritchie / Tyrell / Baucsh / Bespoke Paul Henderson have already moved drastically away from the Pepper recommendations which she/Inq made more than clear that ALL recs must be implemented to avert, mitigate THE REAL RISKS in play. eg Waste and flowback management and disposal. eg independent monitoring not self monitoring. I'm also of the understanding there is no (so called) treatment plant or other secured here in the NT or either Mt Isa or other. Salination alone is a extreme risk never mind the millions of litres of extra corrosive chemicals thrown down and never mind all the natural occurring nuero toxins, heavy metals being dragged up.

Given us Territory taxpayers are actually paying Origin (santos, falcon, pangea, tristar, conocophilips etc) cold hard cash by the millions could you be so gracious as to reject the EMP that from the get-go is subverting and perverting the lnq findings and expectations of best science and risk management. W A T E R. H A B I T A T.

I also, again, strongly urge you to reconsider Origin operating in the NT in toto. They are not a fit and proper operator and or establishment. It's all on the public record!! How come our govt does not do cursory vetting on these bad, negligent, tricky, wreckless, polluting, tax

avoiding corporates? If Origin can pass the muster it boggles the mind what level of ordinary scrutiny the NTG/Leonardi/Tyrel/EPA will harbour and abet. WhoseBreadIEatWhoseSongISing#

Please reject this outright offensive proposal. This is in no way the way to set the bar for unconventional fracking (and oil and coal) in the Northern Territory. Grow a backbone for Christ's sakes! Open, Accountable, Trust. EIS?

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

Please reply to Caroline Water Protector Tapp at \*\*\*\*\*\*\*\*\*.

## Tapp, Daniel – Tuesday, 28 May 2019 – 20:12:13

Subject	Objection to Origin's Kyalla frack site in the NT
From	Daniel Tapp
Sent	28/05/2019 8:12:13 PM

## Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

## OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

## WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Daniel Tapp Northern Territory, 0852, Australia

This email was sent by Daniel Tapp via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tapp at \*\*\*\*\*\*\*\*\*.

## Tapp, David – Sunday, 26 May 2019 – 08:37:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	David And Sheryl Tapp
Sent	26/05/2019 8:37:17 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.

Australia is better than this: more intelligent and more capable of operating in the world of the future. The plans suggested by Origin flout scientific knowledge and propel Australia backwards into the ignorance of a crude and destructive past.

Thank you for considering my concerns.

Yours sincerely, David and Sheryl Tapp

This email was sent by David and Sheryl Tapp via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 and Sheryl provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to David and Sheryl Tapp at \*\*\*\*\*\*\*\*\*.

## Tapsall, Corrie – Friday, 24 May 2019 – 20:34:48

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Corrie Tapsall
Sent	24/05/2019 8:34:48 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
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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, Corrie Tapsall Pottsville, New South Wales, 2489, Australia

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

Please reply to Corrie Tapsall at \*\*\*\*\*\*\*\*\*.

## Tarrant, Michael - Saturday, 25 May 2019 - 15:41:01

Subject	Objection to Origin's Kyalla frack site in the NT
From	Michael Tarrant
Sent	25/05/2019 3:41:01 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

## OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

## WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Michael Tarrant Cowan, New South Wales, 2081, Australia

This email was sent by Michael Tarrant via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tarrant at \*\*\*\*\*\*\*\*\*.

# Taskas, David – Tuesday, 28 May 2019 – 18:58:32

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	David Taskas
Sent	28/05/2019 6:58:32 PM

I object

David Taskas
\*\*\*\*\*\*\*\*\*

VIC 3980

## Tate, Ebonie – Thursday, 30 May 2019 – 06:39:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ebonie Tate
Sent	30/05/2019 6:39:15 AM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Ebonie Tate Bilinga, Queensland, 4225, Australia

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

Please reply to Ebonie Tate at \*\*\*\*\*\*\*\*\*\*.

## Tawhai, Hirini - Thursday, 30 May 2019 - 12:54:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Hirini Tawhai
Sent	30/05/2019 12:54:14 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.

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

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

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

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

Below are a list of my recommendations:

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

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

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

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Yours sincerely, Hirini Tawhai Melbourne, Victoria, 3004, Australia

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

Please reply to Hirini Tawhai at \*\*\*\*\*\*\*\*\*.

## Taylor, Chris – Saturday, 25 May 2019 – 02:52:09

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Chris Taylor
Sent	25/05/2019 2:52:09 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.

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

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

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

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Yours sincerely, Chris Taylor Paddington, New South Wales, 2021, Australia

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

Please reply to Chris Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Dana – Friday, 24 May 2019 – 07:01:00

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)			
From	Dana Taylor			
Sent	24/05/2019 7:01:00 AM			

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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

Yours sincerely, Dana Taylor

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

Please reply to Dana Taylor at \*\*\*\*\*\*\*\*\*.

# TAYLOR, Faith – Wednesday, 29 May 2019 – 07:36:32

Subject	Objection to Origin's Kyalla frack site in the NT		
From	Faith TAYLOR		
Sent	29/05/2019 7:36:32 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, Faith TAYLOR Knuckey Lagoon, Northern Territory, 0828, Australia

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

Please reply to Faith TAYLOR at \*\*\*\*\*\*\*\*\*.

# Taylor, Georgie – Wednesday, 29 May 2019 – 06:38:08

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling		
	and Hydraulic Fracturing 2019 Program EP117 N2		
From	Georgie Taylor		
Sent	29/05/2019 6:38:08 AM		

### Sir,

I am writing to express my concern that you are considering awarding Origin Energy a license to frack for shale gas in the Beetaloo Basin NT.

I believe this is an unsustainable and short term enterprise which will have far reaching and ongoing adverse effects on the land, people's and environments in NT.

Please reconsider the awarding of any such license, as it has been proven time and again that fracking has dangerous, and toxic side effects to the lands and communities which inhabit the area and surrounding country.

Thank you for your consideration,

Georgie Taylor \*\*\*\*\*\*\*\*\*\*\*\* NSW 2483

# Taylor, Gillian – Wednesday, 29 May 2019 – 11:24:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gillian Taylor
Sent	29/05/2019 11:24:13 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.

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, Gillian Taylor Redlynch, Queensland, 4870, Australia

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Please reply to Gillian Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Graeme - Thursday, 30 May 2019 - 4:04 PM

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)			
From	Taylor, Graeme			
Sent	Thursday, 30 May 2019 - 4:04 PM			

See Next page

**From:** noreply@denr.nt.gov.au

**Sent:** Thursday, 30 May 2019 4:04 PM

To: WebAdmin DENR

**Subject:** DENR - Consultation Form - 700927

#### **Contact details**

First name: Graeme Surname: Taylor

Email address:

Country: Australia Postcode: 4067

Phone number:

Stakeholder type: Community

**Feedback** 

Activity you are

providing

Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

feedback on:

Category type: Flora and fauna, Climate change, Economic, Water

If other, please

specify::

Dear Northern Territory government, I am writing to express my concerns regarding expanding shale gas extraction in the Northern Territory. Fracking processes have caused massive pollution to groundwater around the world: the scale of this problem is shown by the need for US shale oil and gas producers to secure exemptions from environmental and health audits and regulations in the states where they operate. Serious environmental and health issues have resulted in a number of states banning fracking, including New York and Maryland. Fracking is also banned in Germany, France, Ireland and Bulgaria. While I am not an expert on these subjects, I have expertise on climate change: I recently co-authored (with two senior University of Queensland academics) a journal article reviewing the latest scientific literature on climate target overshoot and mitigation risks and options (it should be published in Climatic Change later this year). All evidence indicates that the Paris Agreement targets for keeping global temperatures below dangerous levels will be missed, with consequences that are likely to be both irreversible and catastrophic. In Australia we are already seeing the impact of climate change, e.g. the loss of 50% of coral reefs due to bleaching and increasingly extreme weather events such as more intense storms, droughts, floods and heat waves. We cannot afford to exacerbate these problems by increasing fossil fuel production in Australia, especially as our country is on track to miss its international commitments (rather than reducing greenhouse gas emissions, Australian emissions have been increasing for the past four years). Before you proceed further, you need to conduct a comprehensive, assessment of the relative environmental, economic and health benefits, costs and risks of shale gas production. While the Origin project will probably create short term financial benefits for the Northern Territory, the resulting hydrological and atmospheric pollution will certainly have enormous long-term costs for the region and the world. Because these costs will far outweigh the benefits, it would be irresponsible to allow Origin to proceed with this application. Sincerely, Graeme Taylor, PhD

Comments:

Attachments: No file uploaded

Privacy:

# Taylor, Helen – Wednesday, 29 May 2019 – 17:36:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)			
From	Helen Taylor			
Sent	29/05/2019 5:36:31 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 and present my concerns regarding fracking for gas in the NT.

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 chaos. The threat climate changes poses to everyone on the planet is enormous and we need to be transitioning to renewable energy sources now.

- 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 recommendations I strongly suggest:

- 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.

Thank you for taking the time to read my submission, 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, Helen Taylor Mylor, South Australia, 5153, Australia

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Please reply to Helen Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Jane – Friday, 24 May 2019 – 07:47:36

Subject	Re: Objection to Origin Energy's Fracking Plans			
From	Jane Taylor			
Sent	24/05/2019 7:47:36 AM			

To whom it may concern

Department of Environment and Natural Resources (DENR),

My daughter has been working in NT for years so we have visited the NT many times and swum in pools that would be damaged by fracking.

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. DON"T ALLOW FRACKING!

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] Jumb	unna Insti	tute fo	r Educatio	n and Resea	arc	h "Hydraul	ic Fractu	iring and Free,	, Prior and
Informed	Consent	in the	Northern	Territory:	A	Literature	Review	"https://accr.o	org.au/wp
content/u	ploads/Ju	mbunn	a-FPIC-rev	view-final.p	df				

Yours sincerely, jane taylor

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Please reply to jane taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Jane – Thursday, 30 May 2019 – 06:01:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jane Taylor
Sent	30/05/2019 6:01:43 AM

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

- [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, Jane Taylor Marla, South Australia, 5724, Australia

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

Please reply to Jane Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Jenny - Friday, 24 May 2019 - 11:52:36

Subject	Objection to Origin's Kyalla frack site in the NT			
From	Jenny Taylor			
Sent	24/05/2019 11:52:36 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, Jenny Taylor White Gums, Northern Territory, 0870, Australia

This email was sent by Jenny Taylor via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Jess - Friday, 24 May 2019 - 08:15:24

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jess Taylor
Sent	24/05/2019 8:15:24 AM

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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Yours sincerely, Jess Taylor

This email was sent by Jess Taylor via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Kath – Thursday, 23 May 2019 – 17:50:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kath Taylor
Sent	23/05/2019 5:50:05 PM

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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Yours sincerely, Kath Taylor Mullaloo, Western Australia, 6027, Australia

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

Please reply to Kath Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Kath – Monday, 27 May 2019 – 09:40:11

Subject	Objection to Origin's Kyalla frack site in the NT
From	Kath Taylor
Sent	27/05/2019 9:40:11 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, Kath Taylor Mullaloo, Western Australia, 6027, Australia

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

Please reply to Kath Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Katharine – Thursday, 30 May 2019 – 10:27:15

Subject	Objection to Origin's Kyalla frack site in the NT
From	Katharine Taylor
Sent	30/05/2019 10:27:15 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.

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

Please reply to Katharine Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Kirby – Wednesday, 29 May 2019 – 11:27:20

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kirby Taylor
Sent	29/05/2019 11:27:20 AM

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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Yours sincerely, Kirby Taylor Red Hill, Australian Capital Territory, 2603, Australia

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

Please reply to Kirby Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Laura - Thursday, 23 May 2019 - 18:16:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Laura Taylor
Sent	23/05/2019 6:16:59 PM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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, Laura Taylor Bardon, Queensland, 4065, Australia

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

Please reply to Laura Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Leon – Saturday, 25 May 2019 – 12:12:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Leon Taylor
Sent	25/05/2019 12:12:31 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.

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, Leon Taylor Tewantin, Queensland, 4565, Australia

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

Please reply to Leon Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Linda – Tuesday, 28 May 2019 – 10:29:54

Subject	Objection to Origin's Kyalla frack site in the NT
From	Linda Taylor
Sent	28/05/2019 10:29:54 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, Linda Taylor Balgowlah, New South Wales, 2093, Australia

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

Please reply to Linda Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Marie – Wednesday, 29 May 2019 – 22:13:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Marie Taylor
Sent	29/05/2019 10:13:11 PM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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

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

Please reply to Marie Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Mark – Tuesday, 28 May 2019 – 19:55:47

Subject	markwftaylor@hotmail.com
From	Mark Taylor
Sent	28/05/2019 7:55:47 PM

It's not worth the risk to precious groundwater resources to approve fracking in the NT.

As we have seen in Queensland, too many aquifers and farm water bores have already been contaminated and damaged.

The rights and interests of traditional owners should be paramount in this matter.

Sincerely,

Mark Taylor

# Taylor, Mark – Wednesday, 29 May 2019 – 05:16:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Mark Taylor
Sent	29/05/2019 5:16:17 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, Mark Taylor

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

Please reply to Mark Taylor at \*\*\*\*\*\*\*\*\*.

# TAYLOR, Mel – Wednesday, 29 May 2019 – 16:11:52

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Mel TAYLOR
Sent	29/05/2019 4:11:52 PM

- I Object to this project and don't believe it should go AHEAD as it is a:
- 1.threat to our safe climate future
- 2. Risk to human health, the environment and water ways due to the toxic chemicals used in the fracking process
- 3. Possibility that the traditional owners have not been consulted appropriately Postcode 2602

# Taylor, Paul - Sunday, 26 May 2019 - 11:46:51

Subject	Objection to Origin's Kyalla frack site in the NT
From	Paul Taylor
Sent	26/05/2019 11:46:51 AM

## Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

## OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

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

Please reply to Paul Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Penelope – Tuesday, 28 May 2019 – 13:31:03

Subject	Objection to Origin's Kyalla frack site in the NT
From	Penelope Taylor
Sent	28/05/2019 1:31:03 PM

## Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

## OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

## WET SEASON RISKS WITH WASTE ON SITE

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

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

## TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Penelope Taylor Winfield, Queensland, 4670, Australia

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

Please reply to Penelope Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Renée – Monday, 27 May 2019 – 23:14:01

Subject	#FrackOff #SayNoToFracking My Objection to Origin's Kyalla frack site in the NT
From	Renée Taylor
Sent	27/05/2019 11:14:01 PM

## Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

## OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

## WET SEASON RISKS WITH WASTE ON SITE

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

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

## TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Renée Taylor Meadow Springs, Western Australia, 6210, Australia

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

Please reply to Renée Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Rigby – Wednesday, 29 May 2019 – 07:48:57

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Rigby Taylor
Sent	29/05/2019 7:48:57 AM

This project must not proceed because:

- 1. It is a threat to our climate. All climate-warming fossil fuels must be kept in the ground. We cannot afford to permit the possibility of 50 power stations operating for thirty years.
- 2. The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources.
- 3. Origin is proposing to use open tanks to store liquids that will poison the environment forever.
- 4. 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.
- 5. The Jumbunna Institute at UTS, has questioned whether communities have been provided adequate information about the fracking processes, so exploration permits issued in the Northern Territory for unconventional gas were issued in the absence of free, prior and informed consent'. So it will be a crime to proceed with the current exploration permit without further consultation.

# Taylor, Yvette – Wednesday, 29 May 2019 – 11:34:23

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Yvette Taylor
Sent	29/05/2019 11:34:23 AM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Yvette Taylor Harrogate, South Australia, 5244, Australia

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Please reply to Yvette Taylor at \*\*\*\*\*\*\*\*\*.

# Taylor, Zoe – Monday, 27 May 2019 – 12:40:57

Subject	Objection to Origin's Kyalla frack site in the NT
From	Zoe Taylor
Sent	27/05/2019 12:40:57 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.

## 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, Zoe Taylor Gillingarra, Western Australia, 6510, Australia

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Please reply to Zoe Taylor at \*\*\*\*\*\*\*\*\*.

# Teagle, Kathryn – Friday, 24 May 2019 – 07:55:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kathryn Teagle
Sent	24/05/2019 7:55:10 AM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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We have so little of our environment left intact or at least viable, it is imperiative that we protect what we can. This is your job. When your children and grandchildren ask what you were doing at this crucial time, please be able to tell them that you did everything you could to save their future from the mess we've made.

Yours sincerely, Kathryn Teagle Mayfield, New South Wales, 2304, Australia

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

Please reply to Kathryn Teagle at \*\*\*\*\*\*\*\*\*.

# Teasdale, Mark – Wednesday, 29 May 2019 – 20:21:41

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Mark Teasdale
Sent	29/05/2019 8:21:41 PM

We need to shift to renewable energy. Water is one of the most precious resources we have. Fracking leads to contamination of the water table. Fracking is short term profits that will ruin the viability of future tourism, agricultural and lifestyle of communities in the area. It will create a polluted industrial landscape. Australia has abundant renewable and natural resources. These can be harnessed safely and with little impact on the environment. Not to mention that we do not need to burn anymore fossil fuels. Economically, renewable energy, particularly wind and solar are now cheaper than coal and gas to produce electricity. The costs of renewable energy are continuing to decline. Gas and coal will become stranded assets, leaving a large cost for the government to clean up. Fossil fuels are just old sunlight, its time to embrace the future and the new technologies of renewable energy, both cleaner and smarter.

Mark Teasdale \*\*\*\*\*\*\*\*\*\*\*\* WA 6281

# Teather, Liz – Thursday, 23 May 2019 – 18:01:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Liz Teather
Sent	23/05/2019 6:01:15 PM

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

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

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

I stand by the comments below. I feel very strongly that the environment will be irreversibly damaged by fracking.

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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Please reply to Liz Teather at \*\*\*\*\*\*\*\*\*.

## Telfer, Louise – Saturday, 25 May 2019 – 01:49:45

Subject	Objection to Origin's Kyalla frack site in the NT
From	Louise Telfer
Sent	25/05/2019 1:49:45 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.

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, louise telfer Suffolk Park, New South Wales, 2481, Australia

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Please reply to louise telfer at \*\*\*\*\*\*\*\*\*.

## Telford, Amelia - Thursday, 23 May 2019 - 17:06:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Amelia Telford
Sent	23/05/2019 5:06:54 PM

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

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

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

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

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

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, Amelia Telford Preston, Victoria, 3072, Australia

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

Please reply to Amelia Telford at \*\*\*\*\*\*\*\*\*.

## Temby, Jon – Wednesday, 29 May 2019 – 11:35:34

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Jon Temby
Sent	29/05/2019 11:35:34 AM

I object to this project and don't believe it should go ahead. It seeks to increase the use of climate changing fossil fuels. The fracking processes use chemicals that represent a threat to human health, the natural environment and water sources.

The chemicals used in fracking must be adequately health and environmentally tested before being used in the fracking processes. The health and environmental risks of all chemicals used in the fracking processes are exacerbated by the use of open storage tanks. The fracking process is a frequent contributor to permanent damage to aquifers. In the driest inhabited continent, that is an unacceptable risk. Approval from Traditional Owners is also critical to granting any approval to proceed with this shortsighted and damaging project.

## Temming, Erin – Friday, 24 May 2019 – 06:10:52

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Erin Temming
Sent	24/05/2019 6:10:52 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.

- 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, Erin Temming Ocean Grove, Victoria, 3226, Australia

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

Please reply to Erin Temming at \*\*\*\*\*\*\*\*\*.

## Tempest, Sharlien – Friday, 24 May 2019 – 12:30:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sharlien Tempest
Sent	24/05/2019 12:30:13 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.

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

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Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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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, Sharlien Tempest Melbourne, Victoria, 3000, Australia

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Please reply to Sharlien Tempest at \*\*\*\*\*\*\*\*\*.

## Temple, Bill – Wednesday, 29 May 2019 – 17:45:07

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Bill Temple
Sent	29/05/2019 5:45:07 PM

Although I live in Melbourne I have great memories of my wife and I taking caravan trips through the fascinating areas of your state. I see (via GetUp) that Origin Energy want to start fracking operations in some of these wonderful areas. Please do not let this happen. Over the long term you will be much better off financially from tourists than Big Business.

Also I am informed that dangerous chemicals would be used and stored in the process and this would put at risk the health of wild life and and the people -- both indigenous and others.

I am informed that Origin are trying to rush these matters through without due detailed consent from the people and statutory bodies who live in and administer the area.

Please take the time to study the problems involved in this "fracking" business and do not give approval Origin until all details have been explored.

Yours sincerely,

Bill & Jenny Temple, Victoria. 3141

## Templeton, Gretel – Thursday, 23 May 2019 – 20:35:07

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gretel Templeton
Sent	23/05/2019 8:35:07 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.

- 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, Gretel Templeton

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Please reply to Gretel Templeton at \*\*\*\*\*\*\*\*\*.

## Tepania, Tia – Wednesday, 29 May 2019 – 11:56:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tia Tepania
Sent	29/05/2019 11:56:19 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.

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Yours sincerely, Tia Tepania Cronulla, New South Wales, 2230, Australia

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Please reply to Tia Tepania at \*\*\*\*\*\*\*\*\*.

# Terri, Melinda – Thursday, 23 May 2019 – 20:31:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Melinda Terri
Sent	23/05/2019 8:31:03 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.

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Yours sincerely, Melinda Terri Rye, Victoria, 3941, Australia

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Please reply to Melinda Terri at \*\*\*\*\*\*\*\*\*.

## Terrill, Neale - Thursday, 23 May 2019 - 19:13:38

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Neale Terrill
Sent	23/05/2019 7:13:38 PM

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

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

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

Please reply to Neale Terrill at \*\*\*\*\*\*\*\*\*.

## Terrill, Neale - Friday, 24 May 2019 - 16:55:44

Subject	Objection to Origin's Kyalla frack site in the NT
From	Neale Terrill
Sent	24/05/2019 4:55:44 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.

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Please reply to Neale Terrill at \*\*\*\*\*\*\*\*\*.

## Terry, Rachael – Thursday, 23 May 2019 – 23:21:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rachael Terry
Sent	23/05/2019 11:21:29 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.

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Rachael Terry Richmond, Victoria, 3121, Australia

This email was sent by Rachael Terry via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Terry at \*\*\*\*\*\*\*\*\*.

## Thatcher, Glenn – Friday, 24 May 2019 – 08:07:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Glenn Thatcher
Sent	24/05/2019 8:07:25 AM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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Yours sincerely, Glenn Thatcher Tarnagulla, Victoria, 3551, Australia

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Please reply to Glenn Thatcher at \*\*\*\*\*\*\*\*\*.

## Theiss, Gary – Friday, 24 May 2019 – 19:12:45

Subject	Objection to Origin's Kyalla frack site in the NT
From	Gary Theiss
Sent	24/05/2019 7:12:45 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

Fracking has also been proven to pollute underground aquafers.

### 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, Gary Theiss Bathurst, New South Wales, 2795, Australia

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

Please reply to Gary Theiss at \*\*\*\*\*\*\*\*\*.

## Theol, Janene – Wednesday, 29 May 2019 – 12:29:06

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Janene Theol
Sent	29/05/2019 12:29:06 PM

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

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

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

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

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

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, Janene Theol Mount Victoria, New South Wales, 2786, Australia

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

Please reply to Janene Theol at \*\*\*\*\*\*\*\*\*.

## Theophilus, Sue – Saturday, 25 May 2019 – 11:51:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sue Theophilus
Sent	25/05/2019 11:51:33 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.

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, Sue Theophilus

### Quakers Hill, New South Wales, 2763, Australia

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

Please reply to Sue Theophilus at \*\*\*\*\*\*\*\*\*.

## Therese, Helen – Friday, 24 May 2019 – 05:55:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helen Therese
Sent	24/05/2019 5:55:11 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:

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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,
\*\*\*\*\*\*\*\*\* Therese
Tenambit, New South Wales, 2323, Australia

This email was sent by Helen Therese via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Therese at \*\*\*\*\*\*\*\*\*.

## Thies, Leslye – Wednesday, 29 May 2019 – 11:29:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Leslye Thies
Sent	29/05/2019 11:29:59 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

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

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

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

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

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

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
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Yours sincerely, Leslye Thies Heathcote, Victoria, 3523, Australia

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

Please reply to Leslye Thies at \*\*\*\*\*\*\*\*\*.

## Thio, Jill - Sunday, 26 May 2019 - 07:31:31

Subject	Submission: Origin Energy Kyalla NT frack site
From	Jill Thio
Sent	26/05/2019 7:31:31 AM

#### Dear Onshore Gas division,

I am very concerned by the potential environmental harm posed by fracking and so 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, Jill Thio Deptford, Victoria, 3875, Australia

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

Please reply to Jill Thio at \*\*\*\*\*\*\*\*\*.

## Thio, Jill – Wednesday, 29 May 2019 – 14:54:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jill Thio
Sent	29/05/2019 2:54:36 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.

- 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, Jill Thio

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Please reply to Jill Thio at \*\*\*\*\*\*\*\*\*.

## Thirsk, Joanna – Thursday, 30 May 2019 – 22:03:08

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Joanna Thirsk
Sent	30/05/2019 10:03:08 PM

Dear Sir/madam, I am writing to object to the proposed fracking in the Northern Territory by Origin . It is grossly shortsighted to be considering this project in the present climate change crisis which has reached an urgency which cannot be ignored. If this is not enough to consider, the pollution and over consumption of valuable water resources must be avoided. Gas will not provide us with food and clean water. When the world no longer wishes to purchase and use fossil fuels the people of Australia and the NT in particular will be left with dead country and polluted water. the suggested use of open tanks to store contaminated water which would create a danger for people and animals, is an indication of the attitude of the company to this project ie cost cutting with little care for the effect on local community. It is unclear whether the local indigenous people have been adequately and honestly informed of the long term consequences of fracking to their country for them to be able to give free, prior and informed consent. I therefore urge you not to allow this exploratory well.

Joanna Thirsk \*\*\*\*\*\*\*\*\*\*\*\*\*\* NSW 2454

## Thomas, Al – Tuesday, 28 May 2019 – 18:25:42

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Al Thomas
Sent	28/05/2019 6:25:42 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.

## Thomas, Amy – Monday, 27 May 2019 – 09:47:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Amy Thomas
Sent	27/05/2019 9:47:29 AM

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

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

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

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, Amy Thomas Woody Point, Queensland, 4019, Australia

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Please reply to Amy Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Annemarie – Tuesday, 28 May 2019 – 19:19:35

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Annemarie Thomas
Sent	28/05/2019 7:19:35 PM

We are asking you to stop Origin Energy! Please look after our Original Owners! They have been here for Thousands of Years and they know how to treat Country! We would not be in such a mess if we all listen to them!

Yours faithfully,

Annemarie & Len Thomas

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

# Thomas, Bryan - Friday, 24 May 2019 - 08:54:51

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bryan Thomas
Sent	24/05/2019 8:54:51 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.

In regard to all the points mentioned please place yourself and your loved ones into this circumstance and deeply empathise with your fellow humans feeling their plight and the intrusion to fundamental human existence that this proposal represents. Contaminated ground water..... What would you do if that was the only source of water available to you...

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

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

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

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

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

Below are a list of my recommendations:

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

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

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Please reply to Bryan Thomas at \*\*\*\*\*\*\*\*\*.

## Thomas, Hannah – Thursday, 30 May 2019 – 02:27:39

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Hannah Thomas
Sent	30/05/2019 2:27:39 AM

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

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

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

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

- 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, Hannah Thomas Fairfield, Queensland, 4103, Australia

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Please reply to Hannah Thomas at \*\*\*\*\*\*\*\*\*.

## Thomas, Janette – Friday, 24 May 2019 – 08:31:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Janette Thomas
Sent	24/05/2019 8:31:13 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.

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, Janette Thomas Lavington, New South Wales, 2641, Australia

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Please reply to Janette Thomas at \*\*\*\*\*\*\*\*\*.

## Thomas, Julie – Monday, 27 May 2019 – 23:18:18

Subject	Objection to Origin's Kyalla frack site in the NT
From	Julie Thomas
Sent	27/05/2019 11:18:18 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, Julie Thomas Bouddi, New South Wales, 2251, Australia

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

Please reply to Julie Thomas at \*\*\*\*\*\*\*\*\*.

## Thomas, Katie – Wednesday, 29 May 2019 – 15:57:23

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Katie Thomas
Sent	29/05/2019 3:57:23 PM

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

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

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

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

- 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, Katie Thomas Northcote, Victoria, 3070, Australia

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Please reply to Katie Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Kerry – Friday, 24 May 2019 – 11:41:52

Subject	Objection to Origin's Kyalla frack site in the NT
From	Kerry Thomas
Sent	24/05/2019 11:41:52 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, Kerry Thomas Mount Urah, Queensland, 4650, Australia

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

Please reply to Kerry Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Kerry – Wednesday, 29 May 2019 – 09:29:57

Subject	kit.homas@bigpond.com
From	Kerry Thomas
Sent	29/05/2019 9:29:57 AM

WE DO NOT WANT ANY FRACKING IN THE NORTHERN TERRITORY OR ANYWHERE ELSE!!! FRACKING IS AN ABSOLUTE DISASTER AND A THREAT TO HUMAN LIVES AND THE ENVIRONMENT!!!

# Thomas, Lynden – Thursday, 23 May 2019 – 20:38:41

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lynden Thomas
Sent	23/05/2019 8:38:41 PM

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

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

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

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

As a member of the Australian community, I am deeply concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing in the Northern Territory, (or anywhere else in Australia and the rest of the world) 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 important 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, Lynden Thomas Palmwoods, Queensland, 4555, Australia

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Please reply to Lynden Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Neil – Tuesday, 28 May 2019 – 22:13:08

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Neil Thomas
Sent	28/05/2019 10:13:08 PM

Are you crazy? Do you want to destroy your pristine land, water and air? Look at the examples where fracking was tried in other parts of Australia and the world. An ecological disaster was created and no mining company can fix it despite their promises and guarantees. On top of this you will destroy the sacred lands belonging to our first people. Proceed with this at your own peril but the mistake you make today will last for generations. The health of the people poisoned by the chemicals used in this process is at stake. Don't do it.

Neil Thomas \*\*\*\*\*\*\*\*\*\*\*\*\*\* NSW 2280

# Thomas, Robin - Friday, 24 May 2019 - 17:14:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Robin Thomas
Sent	24/05/2019 5:14:42 PM

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

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

Please receive my submission regarding the above issue.

I write to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP, and in so doing, 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:

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]. Approving this EMP 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.

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] Any big storms out of season, 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.

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. In light of this, companies like Origin should surely consider the distinct future possibility of being found liable with l

itigation outcomes, both by class-action and by individuals, for massive compensation payouts, regarding land and water contamination, sicknesses, cultural infringement, and contravening duty of care obligation, (with all the known science now available), as other companies like Bayer/Monsanto are currently undergoing, and non-adherence with government legislation etc.

The use of dangerous chemicals poses huge risks to the environment, water and community health. The use of open storage tanks would be extremely irresponsible, considering some really concerning chemicals that Origin Energy plans to use down well and store on-site over the dry and wet seasons. Besides the horrible contamination of our grounds and soils, even further contamination would result from rain inundation of uncovered waste tanks!

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
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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, Robin Thomas

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

Please reply to Robin Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Russell - Monday, 27 May 2019 - 14:03:40

Subject	Objection to Origin's Kyalla frack site in the NT
From	Russell Thomas
Sent	27/05/2019 2:03:40 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

# OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Russell Thomas Joyces Creek, Victoria, 3364, Australia

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

Please reply to Russell Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Russell – Wednesday, 29 May 2019 – 15:19:47

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Russell Thomas
Sent	29/05/2019 3:19:47 PM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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

Yours sincerely, Russell Thomas Mutdapilly, Queensland, 4307, Australia

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Please reply to Russell Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Sherry – Saturday, 25 May 2019 – 10:43:27

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sherry Thomas
Sent	25/05/2019 10:43:27 AM

Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

# OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

# TRANSPORT RISKS AND TOURISM IMPACTS

As a tourism operator in WA I know how sensitive tourists are to ugly industrial sites near their chosen holiday location - so they just dont come again. Eco-tourists (a large percentage these days) wont come at all if they know fracking is occurring nearby. 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.

Yours sincerely, Sherry Thomas Lowden, Western Australia, 6240, Australia

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

Please reply to Sherry Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Siena – Wednesday, 29 May 2019 – 18:34:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Siena Thomas
Sent	29/05/2019 6:34:34 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.

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

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

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

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

Below are a list of my recommendations:

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

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

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

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

Yours sincerely, Siena Thomas Malvern, Victoria, 3144, Australia

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

Please reply to Siena Thomas at \*\*\*\*\*\*\*\*\*.

# Thomas, Susan – Tuesday, 28 May 2019 – 18:30:51

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Susan Thomas
Sent	28/05/2019 6:30:51 PM

# Dear Minister

It is a well know fact that cranking is bad for the environment. It destroys the water systems. Allows gas to seep into the water systems of the Northern Territory

It's destroyed the environment in Queensland and areas of

**NSW** 

So Minister what are you going to do about it?....?

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

Susan Thomas \*\*\*\*\*\*\*

NSW 2037

# Thomas, Winsome – Thursday, 23 May 2019 – 17:40:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Winsome Thomas
Sent	23/05/2019 5:40:17 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.

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Yours sincerely, Winsome Thomas Melbourne, Victoria, 3004, Australia

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

Please reply to Winsome Thomas at \*\*\*\*\*\*\*\*\*.

# Thomason, Sally - Friday, 24 May 2019 - 11:11:24

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sally Thomason
Sent	24/05/2019 11:11:24 AM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

# OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Sally Thomason New South Wales, 2460, Australia

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

Please reply to Sally Thomason at \*\*\*\*\*\*\*\*\*.

# Thomas-Page, Georgette – Thursday, 23 May 2019 – 22:05:01

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Georgette Thomas-Page
Sent	23/05/2019 10:05:01 PM

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

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

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

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

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

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

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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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Yours sincerely, Georgette Thomas-page Preston, Victoria, 3072, Australia

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Please reply to Georgette Thomas-page at \*\*\*\*\*\*\*\*\*.

# Thompson, Dave – Tuesday, 28 May 2019 – 22:06:53

Subject	Objection to Origin's Kyalla frack site in the NT
From	Dave Thompson
Sent	28/05/2019 10:06:53 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.

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

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### 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, Dave Thompson Tamarama, New South Wales, 2026, Australia

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

Please reply to Dave Thompson at \*\*\*\*\*\*\*\*\*.

# Thompson, Emily – Tuesday, 28 May 2019 – 19:49:32

Subject	PLEASE DON'T ALLOW FRACKING
From	Emily Thompson
Sent	28/05/2019 7:49:32 PM

Please reconsider, whatever profits may be made please consider the tremendous impact it will have on people and the environment. 1 million species are at risk of extinction and furthermore if global trends continue it is likely bushfires and droughts will double by 2050. There are so many more studies and very disturbing conclusions but I urge you not to brush this away. Coal and fossil fuels are a dying industry investment is falling rapidly and rather then trying to beat a dead horse renewable energy has the potential to create so many jobs that couldn't be offshored. I understand the economic constraints but renewable energy is now cheaper than ever and would result in local jobs. Please consider the effect allowing fracking would have on the planet, animals and ourselves as a species.

Emily Thompson
\*\*\*\*\*\*\*\*\*

VIC 3052

# Thompson, Gayle – Saturday, 25 May 2019 – 13:14:51

Subject	Objection to Origin's Kyalla frack site in the NT
From	Gayle Thompson
Sent	25/05/2019 1:14:51 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, Gayle Thompson West Pymble, New South Wales, 2073, Australia

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

Please reply to Gayle Thompson at \*\*\*\*\*\*\*\*\*.

# Thompson, James – Friday, 24 May 2019 – 19:40:36

Subject	Objection to Origin's Kyalla frack site in the NT
From	James Thompson
Sent	24/05/2019 7:40:36 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, james Thompson Girraween, Northern Territory, 0836, Australia

This email was sent by james Thompson via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Thompson at \*\*\*\*\*\*\*\*\*.

#### Thompson, Janet – Thursday, 30 May 2019 – 06:54:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Janet Thompson
Sent	30/05/2019 6:54:03 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 am aware of the dangers of CSG mining, especially fracking. The release of 'fugitive' emissions (leaks) is several times more damaging to our ozone layer than even in coal mining. The risk of bushfires if the wells are near forests during drought is another problem. The Miners just pack up and leave, and the locals are expected to fight the fire, with explosive gas near.

And of course, all the stuff recorded below.

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

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

absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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

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

Below are a list of my recommendations:

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

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

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

- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Janet Thompson

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

Please reply to Janet Thompson at \*\*\*\*\*\*\*\*\*.

#### Thompson, Judith – Wednesday, 29 May 2019 – 15:14:56

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Judith Thompson
Sent	29/05/2019 3:14:56 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.

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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- [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, Judith Thompson Bardon, Queensland, 4065, Australia

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

Please reply to Judith Thompson at \*\*\*\*\*\*\*\*\*.

### Thompson, Mani – Wednesday, 29 May 2019 – 17:35:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Mani Thompson
Sent	29/05/2019 5:35:13 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.

- 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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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, Mani Thompson Hampton East, Victoria, 3188, Australia

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

Please reply to Mani Thompson at \*\*\*\*\*\*\*\*\*.

#### Thompson, Pat – Thursday, 23 May 2019 – 17:49:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Pat Thompson
Sent	23/05/2019 5:49:37 PM

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

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

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

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

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

Yours sincerely, Pat Thompson

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Please reply to Pat Thompson at \*\*\*\*\*\*\*\*\*\*.

#### Thompson, Philippa – Thursday, 30 May 2019 – 08:12:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Philippa Thompson
Sent	30/05/2019 8:12:31 AM

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

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

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

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

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- [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, Philippa Thompson Ainslie, Australian Capital Territory, 2602, Australia

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

Please reply to Philippa Thompson at \*\*\*\*\*\*\*\*\*.

### Thompson, Ruth – Wednesday, 29 May 2019 – 07:19:06

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Ruth Thompson
Sent	29/05/2019 7:19:06 AM

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.

An independent inquiry into fracking in the Northern Territory found Aboriginal communities overwhelmingly opposed fracking on their land, but Origin is pushing ahead with their dirty fracking plans.

#### Thompson, Sandy – Friday, 24 May 2019 – 16:25:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sandy Thompson
Sent	24/05/2019 4:25:36 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.

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

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Sandy Thompson Barkers Vale, New South Wales, 2474, Australia

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

Please reply to Sandy Thompson at \*\*\*\*\*\*\*\*\*.

#### Thomsen, Denise – Wednesday, 29 May 2019 – 16:07:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Denise Thomsen
Sent	29/05/2019 4:07:45 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.

- 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/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Denise Thomsen Victoria Point, Queensland, 4165, Australia

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

Please reply to Denise Thomsen at \*\*\*\*\*\*\*\*\*.

#### Thomson, Ashley – Wednesday, 29 May 2019 – 17:06:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Ashley Thomson
Sent	29/05/2019 5:06:26 PM

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

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

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

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

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. It 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,
Ashley Thomson
Fairfield, Queensland, 4103, Australia

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

Please reply to Ashley Thomson at \*\*\*\*\*\*\*\*\*.

# Thomson, Barry - Wednesday, 29 May 2019 - 22:54:56

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Barry Thomson
Sent	29/05/2019 10:54:56 PM

I object to Fracking in the Beetaloo basin. The water supply is susceptible to being poisoned by fracking chemicals. we need to respect the land and life that it supports. Focus on the life of the area not the \$.

Respect is the way forward

#### Thomson, Campbell – Wednesday, 29 May 2019 – 11:01:23

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Campbell Thomson
Sent	29/05/2019 11:01:23 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 reject Origin Energy's EMP to protect the land, and our shared future from climate change.

Having worked with different indigenous communities in the NT, I am concerned about the risks associated with Origin Energy's plans for drilling and hydraulic fracturing. I object to the approval of this EMP for the following reasons:

- 1. The Northern Territory is already experiencing the impacts of climate change. It will be severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT will feel this first and worst. 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.
- 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, 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/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours	sincere	ly,

Campbell Thomson
Fitzroy North, Victoria, 3068,
Australia

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

Please reply to campbell thomson at \*\*\*\*\*\*\*\*\*.

# Thomson, Dianne – Thursday, 30 May 2019 – 09:54:43

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Dianne Thomson
Sent	30/05/2019 9:54:43 AM

The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources. The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks. Please don't frack the NT.

#### Thomson, Jackie – Saturday, 25 May 2019 – 08:38:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jackie Thomson
Sent	25/05/2019 8:38:12 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.

- [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, jackie thomson Darlington, South Australia, 5047, Australia

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Please reply to jackie thomson at \*\*\*\*\*\*\*\*\*.

## Thomson, Leo – Friday, 24 May 2019 – 16:23:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Leo Thomson
Sent	24/05/2019 4:23:43 PM

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

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 to ask the DENR to outright reject Origin Energy's EMP in order to ensure that the land, water, health and wellbeing of impacted communities is protected, and to ensure our shared future is protected from the devastating consequences climate change poses. Given the very clear message from climate scientists that we are in a climate emergency, as well as the recent UN report regarding biodiversity loss, it's time the government prioritised the environment and a safe climate over corporate profits.

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

Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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

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

Below are a list of my recommendations:

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

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

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

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

Yours sincerely, Leo Thomson Brunswick, Victoria, 3056, Australia

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Please reply to Leo Thomson at \*\*\*\*\*\*\*\*\*.

#### Thomson, Natasha – Wednesday, 29 May 2019 – 11:29:51

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Natasha Thomson
Sent	29/05/2019 11:29:51 AM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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- [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, Natasha Thomson Vermont, Victoria, 3133, Australia

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

Please reply to Natasha Thomson at \*\*\*\*\*\*\*\*\*.

# Thorn, Jane – Friday, 24 May 2019 – 18:56:59

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jane Thorn
Sent	24/05/2019 6:56:59 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, Jane Thorn Marrara, Northern Territory, 0812, Australia

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

Please reply to Jane Thorn at \*\*\*\*\*\*\*\*\*.

# Thorn, Jennifer – Sunday, 26 May 2019 – 08:31:27

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jennifer Thorn
Sent	26/05/2019 8:31:27 AM

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

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

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

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

Yes think globally, act locally - but for climate change the whole earth is local.

- 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
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Yours sincerely, Jennifer Thorn Loorana, Tasmania, 7256, Australia

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Please reply to Jennifer Thorn at \*\*\*\*\*\*\*\*\*.

# Thorncraft, Katie – Wednesday, 29 May 2019 – 12:59:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Katie Thorncraft
Sent	29/05/2019 12:59:34 PM

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

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

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

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

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

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

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 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, Katie Thorncraft Leichhardt, New South Wales, 2040, Australia

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

Please reply to Katie Thorncraft at \*\*\*\*\*\*\*\*\*.

# Thornton, Lauren – Wednesday, 29 May 2019 – 20:04:01

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Lauren Thornton
Sent	29/05/2019 8:04:01 PM

I'd like to let you know that I believe your desire to extract the gas from under the Northern Territory is not only a bad idea for the Northern Territory but a disaster for the environment as a whole.

We have enough environmental poisons in our atmosphere already without adding more to the heavy burden already carried by our planet.

Our country as well as the whole world is experiencing more extreme weather conditions so it can be expected that open water collection and storage is an emergency.

I wonder how much informed consent has been actually obtained by the people not just the TOs.

This deliberate grasp for profits ahead of consideration of the ramifications of this process and our future seems to have no grasp of reality.

Please be mindful of these plans to further endanger our future. There must be other ways for the government to raise funds.

# Thornton, Liz – Tuesday, 28 May 2019 – 19:06:16

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Liz Thornton
Sent	28/05/2019 7:06:16 PM

Europe has voted strongly for the environment and world wide there is an understanding that we can not rape or pillage when we feel like it. Aboriginals are our original owners of Australia and Origin needs to respect the fact that they do not want their land poisoned through fracking.

# Thornton, Sherrill – Wednesday, 29 May 2019 – 16:30:55

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Sherrill Thornton
Sent	29/05/2019 4:30:55 PM

I'd like to let you know that I believe your desire to extract the gas from under the Northern Territory is not only a bad idea for our present but a definite disaster for the planet's future.

I live in The Hunter Valley, the third most polluted area in Australia. The landscape resembles a moonscape in much of the mined areas.

We have enough environmental poisons in our atmosphere already without adding more to the heavy burden already carried by our planet.

Our country as well as the whole world is experiencing more extreme weather conditions so it can be expected that open water collection and storage is an emergency waiting to happen.

I have travelled extensively to The Territory and hold it dear to my heart as well as the aboriginal people. My husband and travel there every year. Our daughter lives and works there. I wonder how much informed consent has been actually obtained by the people not just the TOs.

This deliberate grasp for profits ahead of consideration of the ramifications of this process and our future seems to have no grasp of reality.

Please be mindful of these plans to further endanger our future. There must be other ways for the government to raise funds.

With great trepidation Sherrill Thornton 2325

Sherrill Thornton
\*\*\*\*\*\*\*\*
NSW 2325

# Thornton, Tammie – Tuesday, 28 May 2019 – 10:55:39

Subject	Objection to Origin's Kyalla frack site in the NT
From	Tammie Thornton
Sent	28/05/2019 10:55:39 AM

#### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

#### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns. I look forward to hearing and seeing if Origin takes the right path. A path that will ensure ongoing support from the public would uses their business, a public who want to support sustainable, safe and renewable energy systems only.

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

Please reply to Tammie Thornton at \*\*\*\*\*\*\*\*\*.

# Thornton, Zoe – Wednesday, 29 May 2019 – 11:34:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Zoe Thornton
Sent	29/05/2019 11:34:29 AM

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

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

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

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, Zoe Thornton Bicton, Western Australia, 6157, Australia

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Please reply to Zoe Thornton at \*\*\*\*\*\*\*\*\*.

# Thorpe, Carly – Thursday, 30 May 2019 – 00:26:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Carly Thorpe
Sent	30/05/2019 12:26:13 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.
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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, Carly Thorpe Doreen, Victoria, 3754, Australia

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Please reply to Carly Thorpe at \*\*\*\*\*\*\*\*\*.

# Thorpe, Coree – Thursday, 23 May 2019 – 20:26:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Coree Thorpe
Sent	23/05/2019 8:26:05 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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- 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, Coree Thorpe Preston, Victoria, 3072, Australia

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Please reply to Coree Thorpe at \*\*\*\*\*\*\*\*\*\*.

# Thorpe, Garry – Sunday, 26 May 2019 – 14:31:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Garry Thorpe
Sent	26/05/2019 2:31:59 PM

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

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

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

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

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Yours sincerely, Garry and Thorpe Ngunnawal, Australian Capital Territory, 2913, Australia

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

Please reply to Garry Thorpe at \*\*\*\*\*\*\*\*\*.

# Thorpe, Lyn - Thursday, 23 May 2019 - 21:15:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lyn Thorpe
Sent	23/05/2019 9:15:31 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.

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Yours sincerely, Lyn Thorpe

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Please reply to Lyn Thorpe at \*\*\*\*\*\*\*\*\*.

# Thrower, Martin – Thursday, 23 May 2019 – 20:23:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Martin Thrower
Sent	23/05/2019 8:23:33 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

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Yours sincerely, Martin Thrower Valentine, New South Wales, 2280, Australia

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Please reply to Martin Thrower at \*\*\*\*\*\*\*\*\*.

# Thrower, Martin – Wednesday, 29 May 2019 – 08:40:20

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Martin Thrower
Sent	29/05/2019 8:40:20 AM

Origin's plans include the use of fracking to extract gas. 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.

# Thurgood, Jim – Saturday, 25 May 2019 – 10:52:31

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jim Thurgood
Sent	25/05/2019 10:52:31 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:

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

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

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

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Please reply to Jim Thurgood at \*\*\*\*\*\*\*\*\*.

### Thurston, Paula – Thursday, 30 May 2019 – 11:48:42

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Paula Thurston
Sent	30/05/2019 11:48:42 AM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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Please reply to Paula Thurston at \*\*\*\*\*\*\*\*\*.

### Thyer, Rosie – Wednesday, 29 May 2019 – 22:01:44

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rosie Thyer
Sent	29/05/2019 10:01:44 PM

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

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

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

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

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

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Below are a list of my recommendations:

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- 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, Rosie Thyer Northcote, Victoria, 3070, Australia

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Please reply to Rosie Thyer at \*\*\*\*\*\*\*\*\*.

### Tidey, Sue – Saturday, 25 May 2019 – 18:08:47

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sue Tidey
Sent	25/05/2019 6:08:47 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, Sue Tidey New South Wales, 2469, Australia

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

Please reply to Sue Tidey at \*\*\*\*\*\*\*\*\*.

### Tierney, Julia – Friday, 24 May 2019 – 13:46:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Julia Tierney
Sent	24/05/2019 1:46:17 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Julia Tierney Manly, New South Wales, 2095, Australia

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

Please reply to Julia Tierney at \*\*\*\*\*\*\*\*\*.

### Tighe, Helena – Thursday, 23 May 2019 – 21:51:38

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Helena Tighe
Sent	23/05/2019 9:51:38 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.

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, Helena Tighe South Coogee, New South Wales, 2034, Australia

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Please reply to Helena Tighe at \*\*\*\*\*\*\*\*\*.

### Tilley, Felicity – Thursday, 30 May 2019 – 07:13:53

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Felicity Tilley
Sent	30/05/2019 7:13:53 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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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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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, Felicity Tilley Artarmon, New South Wales, 2064, Australia

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

Please reply to Felicity Tilley at \*\*\*\*\*\*\*\*\*.

### Tiltsen, Linda – Friday, 24 May 2019 – 15:37:35

Subject	Objection to Origin's Kyalla frack site in the NT
From	Linda Tiltsen
Sent	24/05/2019 3:37:35 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, Linda Tiltsen New South Wales, 2540, Australia

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

Please reply to Linda Tiltsen at \*\*\*\*\*\*\*\*\*.

### Timms, Martin – Saturday, 25 May 2019 – 09:26:27

Subject	Objection to Origin's Kyalla frack site in the NT
From	Martin Timms
Sent	25/05/2019 9:26:27 AM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

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

Please reply to Martin Timms at \*\*\*\*\*\*\*\*\*.

# Tindale, Eveline – Wednesday, 29 May 2019 – 09:14:02

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
_	and Hydraulic Fracturing 2019 Program EP117 N2
From	Eveline Tindale
Sent	29/05/2019 9:14:02 AM

### To the Northern Territory Government:

Please do not allow Origin to go fracking in the Northern territory. These plans pose a terrible threat to water supply, climate and culture. Please stand up to any pressure from Origin (or similar companies) and do not be seduced by any of their promises. Too much is at stake. Respectfully, Eveline Tindale

## Tindale, Gillian – Wednesday, 29 May 2019 – 11:22:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gillian Tindale
Sent	29/05/2019 11:22:25 AM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

- [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

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Please reply to Gillian Tindale at \*\*\*\*\*\*\*\*\*.

### Tipping, Mark – Wednesday, 29 May 2019 – 17:46:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Mark Tipping
Sent	29/05/2019 5:46:29 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.

- 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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- [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, Mark Tipping Kyneton, Victoria, 3444, Australia

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Please reply to Mark Tipping at \*\*\*\*\*\*\*\*\*.

### Tipton, Jacinda – Sunday, 26 May 2019 – 22:19:07

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jacinda Tipton
Sent	26/05/2019 10:19:07 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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, Jacinda Tipton Western Australia, 6701, Australia

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

Please reply to Jacinda Tipton at \*\*\*\*\*\*\*\*\*.

### Tirelli, Cristina – Tuesday, 28 May 2019 – 19:22:04

Subject	Don't frack the NT
From	Cristina Tirelli
Sent	28/05/2019 7:22:04 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.

Cristina Tirelli
\*\*\*\*\*\*\*\*\*\*

### Tisdall, Lena – Wednesday, 29 May 2019 – 10:56:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lena Tisdall
Sent	29/05/2019 10:56:32 AM

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

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

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

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

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

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

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
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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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- [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, Lena Tisdall Indooroopilly, Queensland, 4068, Australia

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Please reply to Lena Tisdall at \*\*\*\*\*\*\*\*\*.

### Tisdall, Trevor – Friday, 24 May 2019 – 06:38:08

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Trevor Tisdall
Sent	24/05/2019 6:38:08 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.

- 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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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
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Yours sincerely, Trevor Tisdall Noarlunga Downs, South Australia, 5168, Australia

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Please reply to Trevor Tisdall at \*\*\*\*\*\*\*\*\*.

# Tobin, Gretel – Wednesday, 29 May 2019 – 21:52:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Gretel Tobin
Sent	29/05/2019 9:52:17 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.

- 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, Gretel Tobin Ashburton, Victoria, 3147, Australia

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Please reply to Gretel Tobin at \*\*\*\*\*\*\*\*\*.

# Todd, Linda – Thursday, 30 May 2019 – 15:30:10

_	objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Linda Todd
Sent	30/05/2019 3:30:10 PM

I call on the Northern Territory Government to block Origin Energy in their plans for gas exploration in the Beetaloo Basin. Against your own fracking inquiry which recommended the use of closed tanks, Origins plans are for the use of open ponds which would put at great risk the health of the water and the communities.

I stand when the traditional owners and Aboriginal communities in imploring your Government to tread carefully in full consideration of the fire outcomes to the environment and climate change in your decision making. Globally fraking has led to environmental disaster.

Linda Todd \*\*\*\*\*\*\*

VIC 3446

# Todd, Maneesha – Friday, 24 May 2019 – 17:40:33

Subject	Objection to Origin's Kyalla frack site in the NT
From	Maneesha Todd
Sent	24/05/2019 5:40:33 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.

#### ABORIGINAL OPPOSITION

The site to be fracked has not made a sufficient effort to outline the impacts of fracking to the Aboriginal custodians of Beetaloo Basin. They should not have to be conducting clearings of sacred sites. You should not be pressuring them into a contract they do not understand. Fracking ruins country and poisons its people, plants and animals. I want you to reach out to Seed Indigenous Youth Climate Network to conduct further consultation with landholders in an environment where they will receive factual and unbiased information about how bad fracking is for country.

### 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, Maneesha Todd Kembla Grange, New South Wales, 2526, Australia

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

Please reply to Maneesha Todd at \*\*\*\*\*\*\*\*\*.

# Todd, Sue – Wednesday, 29 May 2019 – 15:23:21

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Sue Todd
Sent	29/05/2019 3:23:21 PM

Dear Northern Territory Government.

I am currently travelling in the Territory for the first time. What a stunningly beautiful piece of Australia.

It is abundantly clear how precious a resource water is here and how tradit5uonal communities protected and respected waterholes and water resources for thousands of years.

To open this land to fracking and shale oil exploration is a short term criminal act. The potential of destroying or polluting water sources is real. Without water there is nothing. Without oil or gas there is sunlight (which is abundant).

Gas and oil profits go to a few at the expense if us all - and all the plants and animals who are dependent on it (and us to manage what we have).

Do not permit drilling or fracking for gas or oil.

Sincerely
Sue Todd
5 Selbourne Place
Lindisfarne Tas 7015

Sue Todd \*\*\*\*\*\*\*

TAS 7015

# Tofsted, Rebecca – Thursday, 23 May 2019 – 17:31:43

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rebecca Tofsted
Sent	23/05/2019 5:31:43 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.
- 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, Rebecca Tofsted

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Please reply to Rebecca Tofsted at \*\*\*\*\*\*\*\*\*.

# Togni, Liz - Thursday, 23 May 2019 - 20:23:46

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Liz Togni
Sent	23/05/2019 8:23:46 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.

- 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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- 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, Liz Togni Acacia Hills, Northern Territory, 0822, Australia

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Please reply to Liz Togni at \*\*\*\*\*\*\*\*\*.

# Tomkins, David - Thursday, 23 May 2019 - 21:03:19

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	David Tomkins
Sent	23/05/2019 9:03:19 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.

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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.

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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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- [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

**David Tomkins** 

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Please reply to David Tomkins at \*\*\*\*\*\*\*\*\*.

# Tomkins, Rick - Monday, 27 May 2019 - 17:53:41

Subject	Objection to Origin's Kyalla frack site in the NT
From	Rick Tomkins
Sent	27/05/2019 5:53:41 PM

Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Rick Tomkins Burpengary, Queensland, 4505, Australia

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

Please reply to Rick Tomkins at \*\*\*\*\*\*\*\*\*.

# Tomlins, Christopher – Friday, 24 May 2019 – 14:53:29

Subject	Objection to Origin's Kyalla frack site in the NT
From	Christopher Tomlins
Sent	24/05/2019 2:53:29 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Christopher Tomlins

This email was sent by Christopher Tomlins via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tomlins at \*\*\*\*\*\*\*\*\*.

# Tomlins, Rita – Friday, 24 May 2019 – 09:13:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Rita Tomlins
Sent	24/05/2019 9:13:36 AM

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

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

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

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

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

Below are a list of my recommendations:

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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, Rita Tomlins

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Please reply to Rita Tomlins at \*\*\*\*\*\*\*\*\*.

# Tomlinson, Karen – Monday, 27 May 2019 – 07:15:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Karen Tomlinson
Sent	27/05/2019 7:15:45 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.

- 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, Karen Tomlinson Meikleville Hill, Queensland, 4703, Australia

This email was sent by Karen Tomlinson via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tomlinson at \*\*\*\*\*\*\*\*\*.

# Toms, Matt - Sunday, 26 May 2019 - 14:54:14

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Matt Toms
Sent	26/05/2019 2:54:14 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.

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Yours sincerely, Matt Toms Vaucluse, New South Wales, 2030, Australia

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Please reply to Matt Toms at \*\*\*\*\*\*\*\*\*.

# TOMS, Sue – Wednesday, 29 May 2019 – 11:31:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sue TOMS
Sent	29/05/2019 11:31:25 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

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Yours sincerely, Sue TOMS Ayr, Queensland, 4807, Australia

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Please reply to Sue TOMS at \*\*\*\*\*\*\*\*\*.

# Toniolo, Kate – Wednesday, 29 May 2019 – 13:52:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kate Toniolo
Sent	29/05/2019 1:52:25 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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Yours sincerely, Kate Toniolo Nollamara, Western Australia, 6061, Australia

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

Please reply to Kate Toniolo at \*\*\*\*\*\*\*\*\*\*.

# Tonkes, John – Wednesday, 29 May 2019 – 19:27:33

Subject	NT Fracking
From	John Tonkes
Sent	29/05/2019 7:27:33 PM

### Dear Legislative Assembly Member

As a responsible member of a responsible Government, surely you wouldn't thrust the highly deplorable procedure of fracking on the indigenous communities in the Territory!

I don't think there is such an issue with gas extraction as such, but to thrust the fracking aspect into the equation is beyond belief!

Assess the opportunities by way of drilling programmes by all means, but draw the line at Fracking permission unless explicit cooperation by the local indigenous group is negotiated.

In the meantime how dare Origin or anyone in Parliament ride roughshod over established communities with regard to fracking decisions, disregarding the proven science related to water useage and quality!

Hopefully sanity will prevail.

Thanks for your time

John Tonkes

# Tonkin, Emma – Wednesday, 29 May 2019 – 14:51:23

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Emma Tonkin
Sent	29/05/2019 2:51:23 PM

### To whom it may concern,

I am writing to voice my opposition to origin energy's plans for fracking. It puts our water and environment at risk, and it is already apparent from their plans that Origin are putting their own profits above community and environmental concerns.

Please don't let it go ahead.

Sincerely

Emma Tonkin

Emma Tonkin \*\*\*\*\*\*\*\*\*\*\*\*\* NSW 2096

# TOOHEY, Diane - Tuesday, 28 May 2019 - 18:45:15

Subject	Objection to Origin's Kyalla frack site in the NT
From	Diane TOOHEY
Sent	28/05/2019 6:45:15 PM

#### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

#### WET SEASON RISKS WITH WASTE ON SITE

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

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

#### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

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

Please reply to DiANE TOOHEY at \*\*\*\*\*\*\*\*\*.

# Toomath, Michael – Friday, 24 May 2019 – 08:41:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Michael Toomath
Sent	24/05/2019 8:41:16 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.

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, Michael Toomath Cobram, Victoria, 3644, Australia

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Please reply to Michael Toomath at \*\*\*\*\*\*\*\*\*.

# Toomey, Karen – Monday, 27 May 2019 – 10:01:22

Subject	Objection to Origin's Kyalla frack site in the NT
From	Karen Toomey
Sent	27/05/2019 10:01:22 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.

### 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 Toomey Bli Bli, Queensland, 4560, Australia

This email was sent by Karen Toomey via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Toomey at \*\*\*\*\*\*\*\*\*.

# Toomey, Sharelle – Wednesday, 29 May 2019 – 06:16:01

Subject	Reject Origin's fracking well
From	Sharelle Toomey
Sent	29/05/2019 6:16:01 AM

The NT's Environmental Management Plan for an exploration well must not go ahead. 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. The dangers of fracking are well proven. Please do not permit this dirty fracking scheme to go through!

# Tooms, Zane – Monday, 27 May 2019 – 20:06:47

Subject	Objection to Origin's Kyalla frack site in the NT
From	Zane Tooms
Sent	27/05/2019 8:06:47 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, Zane Tooms Claremont North, Western Australia, 6010, Australia

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

Please reply to Zane Tooms at \*\*\*\*\*\*\*\*\*.

# Toon, William - Thursday, 23 May 2019 - 17:57:57

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	William Toon
Sent	23/05/2019 5:57:57 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.

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/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, William Toon Orelia, Western Australia, 6167, Australia

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Please reply to William Toon at \*\*\*\*\*\*\*\*\*.

# Topham, Sue - Sunday, 26 May 2019 - 08:32:17

Subject	Objection to Origin's Kyalla frack site in the NT
From	Sue Topham
Sent	26/05/2019 8:32:17 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, Sue Topham Marrickville, New South Wales, 2204, Australia

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

Please reply to Sue Topham at \*\*\*\*\*\*\*\*\*.

# Topham, Yeeda – Wednesday, 29 May 2019 – 11:29:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Yeeda Topham
Sent	29/05/2019 11:29:13 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:

Groundwater Contamination. The addition of large amounts of chemicals into the ground and rock strata, required to fracture the rock and release the natural gas, will result in the chemicals ending up in the groundwater system. This is unacceptable for the environment and downstream wetlands. We need to be preserving all groundwater in the most pristine condition possible, given a drying climate.

- 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, Yeeda Topham Roleystone, Western Australia, 6111, Australia

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Please reply to Yeeda Topham at \*\*\*\*\*\*\*\*\*.

# Toppi, Christine – Thursday, 23 May 2019 – 18:11:12

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Christine Toppi
Sent	23/05/2019 6:11:12 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.

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

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

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

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

Below are a list of my recommendations:

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

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

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

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Yours sincerely, Christine Toppi Eaglemont, Victoria, 3084, Australia

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Please reply to Christine Toppi at \*\*\*\*\*\*\*\*\*.

# Toprak, Engin – Thursday, 23 May 2019 – 19:10:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Engin Toprak
Sent	23/05/2019 7:10:45 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
- [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, Engin Toprak Glenmore Park, New South Wales, 2745, Australia

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

Please reply to Engin Toprak at \*\*\*\*\*\*\*\*\*.

# Tops, Roelant – Wednesday, 29 May 2019 – 08:50:34

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Roelant Tops
Sent	29/05/2019 8:50:34 AM

I object to the process of fracking which have proven water contamination problems. The contamination associated with this are particularly impacting the Aboriginal communities. The Australian Petroleum and Exploration Association should respect the Traditional Owners and not proceed without their consent.

# Topy, Alyssa – Wednesday, 29 May 2019 – 10:57:27

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Alyssa Topy
Sent	29/05/2019 10:57:27 AM

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

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

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

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

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, Alyssa Topy Glen Iris, Victoria, 3146, Australia

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

Please reply to Alyssa Topy at \*\*\*\*\*\*\*\*\*.

# Toro, Linda – Monday, 27 May 2019 – 07:30:22

Subject	Objection to Origin's Kyalla frack site in the NT
From	Linda Toro
Sent	27/05/2019 7:30:22 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.

### 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, Linda Toro Daisy Hill, Queensland, 4127, Australia

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

Please reply to Linda Toro at \*\*\*\*\*\*\*\*\*.

# Torriero, Isabella – Monday, 27 May 2019 – 15:03:31

Subject	Objection to Origin's Kyalla frack site in the NT
From	Isabella Torriero
Sent	27/05/2019 3:03:31 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.

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, Isabella Torriero Ballarat, Victoria, 3350, Australia

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

Please reply to Isabella Torriero at \*\*\*\*\*\*\*\*\*.

# Toth, Magdalena – Sunday, 26 May 2019 – 04:53:21

Subject	Objection to Origin's Kyalla frack site in the NT
From	Magdalena Toth
Sent	26/05/2019 4:53:21 AM

#### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

#### WET SEASON RISKS WITH WASTE ON SITE

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

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

#### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Magdalena Toth Sydney, New South Wales, 2010, Australia

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

Please reply to Magdalena Toth at \*\*\*\*\*\*\*\*\*.

## Toth, Rosie – Wednesday, 29 May 2019 – 13:44:15

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Rosie Toth
Sent	29/05/2019 1:44:15 PM

I am writing to object to Origin's shale gas plans because of the risks to climate and water. 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.

This would be compounded by Origin planning, if it got the go ahead for exploration, to store the polluted water from the fracking process in open tanks. This is despite the NT Fracking Enquiry recommending the tanks be closed. Moreover the fracking process uses chemicals that are dangerous for human health, the natural environment and water sources.

As important as the above concerns, there are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process.

Yours sincerely,

Rosie Toth, NSW 2537

Rosie Toth \*\*\*\*\*\*\*

NSW 2537

# Touchan, Hanady – Wednesday, 29 May 2019 – 13:16:48

Subject	Objection to Origin's Kyalla frack site in the NT
From	Hanady Touchan
Sent	29/05/2019 1:16:48 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, Hanady Touchan Lalor, Victoria, 3075, Australia

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

Please reply to Hanady Touchan at \*\*\*\*\*\*\*\*\*.

# Touma, Paris – Wednesday, 29 May 2019 – 13:16:11

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Paris Touma
Sent	29/05/2019 1:16:11 PM

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Paris Touma Dee Why, New South Wales, 2099, Australia

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

Please reply to Paris Touma at \*\*\*\*\*\*\*\*\*.

# Touma, Samir – Wednesday, 29 May 2019 – 13:12:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Samir John Touma
Sent	29/05/2019 1:12:37 PM

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

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

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

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

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

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

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 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, samir John Touma

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Please reply to samir john touma at \*\*\*\*\*\*\*\*\*.

# Touma, Susanne – Wednesday, 29 May 2019 – 13:17:32

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Susanne A. Touma
Sent	29/05/2019 1:17:32 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.

- 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, Susanne A. Touma Cromer, New South Wales, 2099, Australia

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

Please reply to Susanne A. Touma at \*\*\*\*\*\*\*\*\*.

# Touzeau, Jane – Wednesday, 29 May 2019 – 15:01:57

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Jane Touzeau
Sent	29/05/2019 3:01:57 PM

The Northern Territory should not permit 'fracking'. It is an industry that cannot be regulated, no matter how many 'regulations' are written.

The chemical cocktail patented by Halliburton is still used and is still kept secret so what is being pumped underground is unknown. Any damage done cannot be traced.

The water of the NT is precious and needs to be protected, not poisoned.

It is a disgrace that APPEA insiders have been employed to advise the Chief Minister (and premiers of other states.

The risks of fracking in the NT are too high to accept.

Yours faithfully

Jane Touzeau \*\*\*\*\*\*\*\*

VIC 3184

# TOVEY, JULIAN - Thursday, 23 May 2019 - 18:41:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	JULIAN TOVEY
Sent	23/05/2019 6:41:21 PM

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

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

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

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

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

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Below are a list of my recommendations:

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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, Julian TOVEY Coburg North, Victoria, 3058, Australia

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Please reply to JULIAN TOVEY at \*\*\*\*\*\*\*\*\*.

# Town, Lorraine - Wednesday, 29 May 2019 - 12:48:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Lorraine Town
Sent	29/05/2019 12:48:15 PM

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

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

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

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

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Lorraine Town Ridgewood, Western Australia, 6030, Australia

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Please reply to Lorraine Town at \*\*\*\*\*\*\*\*\*.

# Townsend, Jean - Monday, 27 May 2019 - 14:30:46

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jean Townsend
Sent	27/05/2019 2:30:46 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.

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

Please reply to Jean Townsend at \*\*\*\*\*\*\*\*\*.

# Trahair, Gillian - Monday, 27 May 2019 - 10:20:56

Subject	Objection to Origin's Kyalla frack site in the NT
From	Gillian Trahair
Sent	27/05/2019 10:20:56 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.

All these affects are detrimental to people and the country . Please reconsider and do not frack in the Northern Territory at all

Thank you for considering my concerns.

Yours sincerely, Gillian Trahair Flinders, Victoria, 3929, Australia

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

Please reply to Gillian Trahair at \*\*\*\*\*\*\*\*\*.

# Trappmann, Bernie – Thursday, 23 May 2019 – 21:38:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Bernie Trappmann
Sent	23/05/2019 9:38:36 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.

- 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, Bernie Trappmann Noonamah, Northern Territory, 0837, Australia

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

Please reply to Bernie Trappmann at \*\*\*\*\*\*\*\*\*.

# Trappmann, Bernie – Friday, 24 May 2019 – 12:25:28

Subject	Objection to Origin's Kyalla frack site in the NT
From	Bernie Trappmann
Sent	24/05/2019 12:25:28 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, Bernie Trappmann

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

Please reply to Bernie Trappmann at \*\*\*\*\*\*\*\*\*.

# Travers, Sue – Thursday, 30 May 2019 – 08:21:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Sue Travers
Sent	30/05/2019 8:21:40 AM

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

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

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

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

- 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, Sue Travers

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

Please reply to Sue Travers at \*\*\*\*\*\*\*\*\*.

# Treasure, Marion – Friday, 24 May 2019 – 11:49:32

Subject	Please do not sanction Origin's Kyalla frack site in the NT
From	Marion Treasure
Sent	24/05/2019 11:49:32 AM

Dear Onshore Gas division,

This is to express my complete distress and objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

I have learned much about fracking and know it is too dangerous to risk imposing on Our Precious Country. While much is said about "world's best practise", until Energy Companies and Governments can truly guarantee they can completely control nature and the natural forces deep within Our Earth, the risk is far too great to allow fracking at all.

There is already well known evidence of fracking risks all around the world, including within Australia, of the uncontrollable ill effects of this practise on water, agriculture, community physical and mental health, tourism by turning once healthy Country into uncontrollable toxic wasteland.

I have learned much about much about and pay great respect to the knowledge of Our Original Peoples. Together, their many Nations kept this Island in prime health, providing them with great food, a healthy life and the true meaning of Responsibility to Respect and Care for Country which, in turn, provided them bountifully with all they needed

Original Peoples lived here in this way for tens of thousands of years prior to Our European takeover which has overseen massive destruction of the balance of nature at a "cracking pace" in merely a few hundred years.

Do you have the humility to own this reality and finally listen to the expertise of Our Original Peoples who are saying NO to fracking for reasons they know from tens of thousands of years of living here?

In my view, this intimate knowledge of Country far surpasses any University degree, Phd, Professorship of the European world, as it comes with rich experience and humility, rather than greedy grab and go, no matter what, of today's way of being.

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, Marion Treasure Fremantle, Western Australia, 6160, Australia

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

Please reply to Marion Treasure at \*\*\*\*\*\*\*\*\*.

# Tredinnick, Shane – Thursday, 23 May 2019 – 17:36:33

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Shane Tredinnick
Sent	23/05/2019 5:36:33 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.

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Shane Tredinnick New South Wales, Australia

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Please reply to Shane Tredinnick at \*\*\*\*\*\*\*\*\*.

## Tregenza, Elizabeth - Saturday, 25 May 2019 - 17:03:32

Subject	Objection to Origin's Kyalla frack site in the NT
From	Elizabeth Tregenza
Sent	25/05/2019 5:03:32 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Elizabeth Tregenza

This email was sent by Elizabeth Tregenza via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tregenza at \*\*\*\*\*\*\*\*\*.

## Treloar, Nigel – Wednesday, 29 May 2019 – 10:52:24

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Nigel Treloar
Sent	29/05/2019 10:52:24 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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- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
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- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wpcontent/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Nigel Treloar Pimlico, Queensland, 4812, Australia

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

Please reply to Nigel Treloar at \*\*\*\*\*\*\*\*\*.

## Treloar, Ros – Saturday, 25 May 2019 – 15:26:39

Subject	Objection to Origin's Kyalla frack site in the NT
From	Ros Treloar
Sent	25/05/2019 3:26:39 PM

### Dear Onshore Gas division,

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

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

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### TRANSPORT RISKS AND TOURISM IMPACTS

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

### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

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

Thank you for considering my concerns.

Yours sincerely, Ros Treloar Clareville, New South Wales, 2107, Australia

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Please reply to Ros Treloar at \*\*\*\*\*\*\*\*\*.

# Tremayne, Terry – Wednesday, 29 May 2019 – 08:59:35

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Terry Tremayne
Sent	29/05/2019 8:59:35 AM

Please stop this abuse of native title owners and stop letting companies like Origin polluting our environment.

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.

## Trembath, Liz – Wednesday, 29 May 2019 – 15:31:19

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Liz Trembath
Sent	29/05/2019 3:31:19 PM

Please don't frack the NT.

Fracking is terrible for the environment, our health and uses too much of the precious water Australia is so short of.

Money-making is not the only thing you should consider ... the health & welfare of all Australians is what matters not big bucks for your donors!

Our indigenous people are best information for the health of our country please trust their opinion.

#nofrackingtheNT

Liz Trembath \*\*\*\*\*\*\*

SA 5159

## TRENOUTH, David - Thursday, 23 May 2019 - 17:34:08

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	David TRENOUTH
Sent	23/05/2019 5:34:08 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.

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

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

Below are a list of my recommendations:

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

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

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Yours sincerely, David TRENOUTH Warradale, South Australia, 5046, Australia

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Please reply to David TRENOUTH at \*\*\*\*\*\*\*\*\*.

## Trethewey, David – Thursday, 23 May 2019 – 18:01:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	David Trethewey
Sent	23/05/2019 6:01:25 PM

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

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

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

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

- 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, David Trethewey

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Please reply to David Trethewey at \*\*\*\*\*\*\*\*\*.

## Trezise, Monica – Thursday, 23 May 2019 – 17:54:50

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Monica Trezise
Sent	23/05/2019 5:54:50 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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Yours sincerely, Monica Trezise Surry Hills, New South Wales, 2010, Australia

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Please reply to Monica Trezise at \*\*\*\*\*\*\*\*\*.

# Tricase, Joe – Wednesday, 29 May 2019 – 18:07:32

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Joe Tricase
Sent	29/05/2019 6:07:32 PM

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

## Triffitt, Esther – Wednesday, 29 May 2019 – 21:31:02

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Esther Triffitt
Sent	29/05/2019 9:31:02 PM

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

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

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

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

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Esther Triffitt Wollongong, New South Wales, 2500, Australia

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Please reply to Esther Triffitt at \*\*\*\*\*\*\*\*\*.

# Trimmer, Terry – Tuesday, 28 May 2019 – 18:23:22

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Terry Trimmer
Sent	28/05/2019 6:23:22 PM

WDear Sir or Madam please reject Origins request to begin fracking on the grounds of environmental preservation. Regards Terry Timmerrite your submission here - use our talking points to the left to guide your submission.

## Trinca, Molly – Wednesday, 29 May 2019 – 11:18:15

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Molly Trinca
Sent	29/05/2019 11:18:15 AM

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

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

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

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

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Please reply to Molly Trinca at \*\*\*\*\*\*\*\*\*.

## Trinder, Margot – Wednesday, 29 May 2019 – 18:15:37

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Margot Trinder
Sent	29/05/2019 6:15:37 PM

I am writing to you to express my objection to the fracking in the NT. I do not believe this should go ahead. The following are a summary of my concerns: 1) I am a mother and my young adult children are becoming increasingly distressed about the climate emergency and the disrespect we are showing for the world we are passing on to them. 2) There are serious concerns as to whether Traditional Owners have been able to provide free, prior and informed consent to the fracking process. 3) The fracking processes uses dangerous chemicals that represent a threat to human health, the natural environment and water sources. 4) The health and environmental risks of the dangerous chemicals used in the fracking processes are exacerbated by the use of open storage tanks.

## Trinkle, Natasha – Thursday, 23 May 2019 – 18:24:17

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Natasha Trinkle
Sent	23/05/2019 6:24:17 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

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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, Natasha Trinkle Wheelers Hill, Victoria, 3150, Australia

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Please reply to Natasha Trinkle at \*\*\*\*\*\*\*\*\*.

## Tripodi, Ann-Marie – Tuesday, 28 May 2019 – 11:48:08

Subject	Objection to Origin's Kyalla frack site in the NT
From	Ann-Marie Tripodi
Sent	28/05/2019 11:48:08 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, Ann-Marie Tripodi Adelaide, South Australia, 5000, Australia

This email was sent by Ann-Marie Tripodi via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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-Marie provided an email address (\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Ann-Marie Tripodi at \*\*\*\*\*\*\*\*\*.

## Trott, Caleb – Saturday, 25 May 2019 – 23:56:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Caleb Trott
Sent	25/05/2019 11:56:40 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.

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Caleb Trott Salisbury, Queensland, 4107, Australia

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

Please reply to Caleb Trott at \*\*\*\*\*\*\*\*\*.

## Troy, Kathleen – Monday, 27 May 2019 – 10:50:54

Subject	Objection to Origin's Kyalla frack site in the NT
From	Kathleen Troy
Sent	27/05/2019 10:50:54 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

Thank you for considering my concerns.

Yours sincerely, Kathleen Troy Lynwood, Western Australia, 6147, Australia

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

Please reply to Kathleen Troy at \*\*\*\*\*\*\*\*\*.

# Truman, Elaine – Wednesday, 29 May 2019 – 17:43:16

Subject	Objection to Origin Energy's Environmental Management Plan (EMP)
From	Elaine Truman
Sent	29/05/2019 5:43:16 PM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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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, Elaine Truman Viewbank, Victoria, 3084, Australia

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

Please reply to Elaine Truman at \*\*\*\*\*\*\*\*\*.

# Tsihlis, Paula – Tuesday, 28 May 2019 – 07:11:38

Subject	Objection to Origin's Kyalla frack site in the NT
From	Paula Tsihlis
Sent	28/05/2019 7:11:38 AM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

# FRACKING SUBSTANCES ARE POISON

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

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

# OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

#### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

Thank you for considering my concerns.

Yours sincerely, Paula Tsihlis Lane Cove DC, New South Wales, 2066, Australia

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

Please reply to Paula Tsihlis at \*\*\*\*\*\*\*\*\*.

# Tuckwell, Richard – Sunday, 26 May 2019 – 13:08:30

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Richard Tuckwell
Sent	26/05/2019 1:08:30 PM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

Yours sincerely, Richard Tuckwell East Side, Northern Territory, 0870, Australia

This email was sent by Richard Tuckwell via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tuckwell at \*\*\*\*\*\*\*\*\*.

# Tui, Shylo – Tuesday, 28 May 2019 – 21:09:30

Subject	Objection to Origin's Kyalla frack site in the NT
From	Shylo Tui
Sent	28/05/2019 9:09:30 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

Thank you for considering my concerns.

Yours sincerely, Shylo Tui Reservoir, Victoria, 3073, Australia

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

Please reply to Shylo Tui at \*\*\*\*\*\*\*\*\*.

# Tuleja, Harley – Thursday, 30 May 2019 – 07:41:29

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Harley Tuleja
Sent	30/05/2019 7:41:29 AM

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

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

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

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

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

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

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

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

Below are a list of my recommendations:

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

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

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

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

Yours sincerely, harley Tuleja Meander, Tasmania, 7304, Australia

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Please reply to harley Tuleja at \*\*\*\*\*\*\*\*\*.

# Tullett, Betty - Friday, 24 May 2019 - 11:30:49

Subject	Objection to Origin's Kyalla frack site in the NT
From	Betty Tullett
Sent	24/05/2019 11:30:49 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

Thank you for considering my concerns.

Yours sincerely, Betty Tullett Huntingdale, Western Australia, 6110, Australia

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Please reply to Betty Tullett at \*\*\*\*\*\*\*\*\*.

# Tully, Colleen – Wednesday, 29 May 2019 – 14:44:30

Subject	Objection to Origin's Kyalla frack site in the NT - this will cost too much
From	Colleen Tully
Sent	29/05/2019 2:44:30 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

Thank you for considering my concerns.

Yours sincerely, Colleen Tully Kunda Park, Queensland, 4556, Australia

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

Please reply to Colleen Tully at \*\*\*\*\*\*\*\*\*.

# Tully, Teresa – Saturday, 25 May 2019 – 15:39:37

Subject	Objection to Origin's Kyalla frack site in the NT
From	Teresa Tully
Sent	25/05/2019 3:39:37 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

# 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

Thank you for considering my concerns.

Yours sincerely, teresa tully

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

Please reply to teresa tully at \*\*\*\*\*\*\*\*\*.

# Tulysewski, Grace – Wednesday, 29 May 2019 – 19:24:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Grace Tulysewski
Sent	29/05/2019 7:24:54 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.

- [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, Grace Tulysewski Mylor, South Australia, 5153, Australia

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Please reply to Grace Tulysewski at \*\*\*\*\*\*\*\*\*.

# Tuna, Barbara - Friday, 24 May 2019 - 12:09:37

Subject	Objection to Origin's Kyalla frack site in the NT
From	Barbara Tuna
Sent	24/05/2019 12:09:37 PM

### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

# 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

Thank you for considering my concerns.

Yours sincerely, Barbara Tuna Mona Vale, New South Wales, 2103, Australia

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Please reply to Barbara Tuna at \*\*\*\*\*\*\*\*\*.

# Tunbridge, Guy – Wednesday, 29 May 2019 – 12:29:59

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

The concept of fracking is ostensibly fine, however, the real world implications of installing drilling sites at the lowest possible cost to reap the highest profits is what makes this process such a danger to the environment. If you feel the need to allow a company like Origin the right to destroy the vegetation and environment to extract land locked fossil fuels to burn and release Carbon Dioxide into the air, then at least put an independent government run oversight committee in to test the areas before installation, during installation and after with massive fines if any breach or contamination is found. And, I would also propose that you setup a publicly accessible central resource for all data collections so it can be monitored by the people of the Northern Territory at any time, and if any breaches are detected by the large amount of clever people in the region it, can be brought to the governments attention.

# Tunnicliffe, Keith – Thursday, 23 May 2019 – 22:05:13

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Keith Tunnicliffe
Sent	23/05/2019 10:05:13 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, Keith Tunnicliffe Pyrmont, New South Wales, 2009, Australia

This email was sent by Keith Tunnicliffe via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Tunnicliffe at \*\*\*\*\*\*\*\*\*.

# Tupling, Kara – Monday, 27 May 2019 – 19:18:23

Subject	Objection to Origin's Kyalla frack site in the NT not complying with recommendations .
From	Kara Tupling
Sent	27/05/2019 7:18:23 PM

#### Dear Onshore Gas division,

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

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

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

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

# OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

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

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

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

### WET SEASON RISKS WITH WASTE ON SITE

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

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

#### TRANSPORT RISKS AND TOURISM IMPACTS

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

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

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

Legal steps are currently being pursued to hold governments and leading authorities accountable for their actions in regard to environmental damage, particularly that which endangers life of both humans and animals. Please consider that within this submission you have been duly notified of the risks and eminent danger to life and that proceeding with consent to this planned activity will be forever known as environmental vandalism and potentially mass murder.

Thank you for considering my concerns.

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

Please reply to Kara Tupling at \*\*\*\*\*\*\*\*\*.

# Tupuola, Florence – Thursday, 23 May 2019 – 19:49:37

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Florence Tupuola
Sent	23/05/2019 7:49:37 PM

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

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

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

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

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

- 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, Florence Tupuola Yarraville, Victoria, 3013, Australia

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

Please reply to Florence Tupuola at \*\*\*\*\*\*\*\*\*.

# Turnbull, Alan - Tuesday, 28 May 2019 - 18:18:00

Subject	Objection to Origin's Kyalla frack site in the NT
From	Alan Turnbull
Sent	28/05/2019 6:18:00 PM

Dear Onshore Gas division,

# THERE IS NOTHING MORE IMPORTANT THAN THE INTEGRITY OF OUR WATER SUPPLY!!

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 Turnbull Varsity Lakes, Queensland, 4227, Australia

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

Please reply to Alan Turnbull at \*\*\*\*\*\*\*\*\*.

# Turnbull, Heidi – Wednesday, 29 May 2019 – 11:31:06

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Heidi Turnbull
Sent	29/05/2019 11:31:06 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.

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, Heidi Turnbull Wodonga, Victoria, 3690, Australia

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Please reply to Heidi Turnbull at \*\*\*\*\*\*\*\*\*.

# TURNBULL, Jacqui – Wednesday, 29 May 2019 – 17:46:23

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jacqui TURNBULL
Sent	29/05/2019 5:46:23 PM

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

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

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

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

- 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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- 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, Jacqui TURNBULL Castlemaine, Victoria, 3450, Australia

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Please reply to Jacqui TURNBULL at \*\*\*\*\*\*\*\*\*.

# Turnbull, Jeremy - Thursday, 23 May 2019 - 20:09:34

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jeremy Turnbull
Sent	23/05/2019 8:09:34 PM

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

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

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

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

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

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

Below are a list of my recommendations:

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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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Please make as stand to stop putting profits before people and our planet.

Yours sincerely, Jeremy Turnbull Port Macquarie, New South Wales, 2444, Australia

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Please reply to Jeremy Turnbull at \*\*\*\*\*\*\*\*\*.

# Turnbull, Kate - Friday, 24 May 2019 - 08:38:21

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kate Turnbull
Sent	24/05/2019 8:38:21 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.

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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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- 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, Kate Turnbull Parkes, New South Wales, 2870, Australia

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Please reply to Kate Turnbull at \*\*\*\*\*\*\*\*\*.

# Turner, Angela – Wednesday, 29 May 2019 – 21:10:03

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Angela Turner
Sent	29/05/2019 9:10:03 PM

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

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

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

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

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

1. Australia's most valuable resource is water. The word fracking comes from the process of obtaining gas; fracturing layers of the earth. Your priority should be protecting aquafers. The long term effects of fracturing the earth have yet to be shown. We only have the companies benefitting from the process telling us it is safe.

The land is fractured by the forced injection of chemicals. Again the private companies tell us this is also safe even though there is film of people burning their drinking water in America and Queenslanders burning bore water. Have you seen chemical analyses of these waters that we are told is safe to drink?

- 2. 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.
- 3. 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.

If the waste water is good for nothing and needs to be stored then it sounds like the water is retaining the fracking chemicals. Has it been proven that these chemicals stay in the water and

cannot evaporate into the atmosphere to pose danger to living things near or far? Another reason that the tanks should not be open air.

Open air tanks would allow the breeding of mosquitoes which carry malaria and dengi fever. The government already spends to encourage the eradication of malaria bearing mosquitoes. Recent documentaries showed that the treatment of denghi fever is much more difficult therefore the spread of the disease will have a more devastating effect on people and the economy.

By the way, where does the waste water come from? Was it drinking water? Australia's limited drinking water looks like become even more scarce. Is it from aquafers? Aren't most aquafers used for human drinking water or for irrigation or for animals?

Mines in northern South Australia have had many spills of thousands of litres of stored water that was contaminated with acid. Why can Origin Energy be expected to be more professional?

- 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. 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.
- 6. A couple of years ago gas from north western Australia was contracted to China; 5-20 ships per day transport it to China; the contract gave China a fixed price for 25 years. Australians now pay more for heating and cooking than the Chinese. The Australian government should be looking after its citizens rather than guaranteeing private profits and happy foreign despots.

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

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.

- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

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

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

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- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Angela Turner Kilmore, Victoria, 3764, Australia

This email was sent by Angela Turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. 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 Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Cara – Wednesday, 29 May 2019 – 15:13:46

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Cara Turner
Sent	29/05/2019 3:13:46 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.

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

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

Below are a list of my recommendations:

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

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

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, Cara Turner Coomera, Queensland, 4209, Australia

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

Please reply to Cara Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Charmaine - Thursday, 23 May 2019 - 17:35:57

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Charmaine Turner
Sent	23/05/2019 5:35:57 PM

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

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

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

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

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

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, Charmaine Turner Invermay, Tasmania, 7248, Australia

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Please reply to Charmaine Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Clare - Thursday, 30 May 2019 - 08:02:54

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Clare Turner
Sent	30/05/2019 8:02:54 AM

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

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

Thank you for the opportunity to make a submission regarding this important issue; an issue which has significant ramifications.

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. Too often there is a bias to move forwards with mining projects without due consideration of the long term environmental effects. 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. If long term sustainability of the planet is to occur we must accept the dominant view of climate scientists and move away from oil and gas and invest our resources in the a mple renewable energy resources which exist in the Northern Territory and our country.
- 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, Clare Turner Saint Andrews, Victoria, 3761, Australia

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Please reply to Clare Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Courtney – Sunday, 26 May 2019 – 16:46:25

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Courtney Turner
Sent	26/05/2019 4:46:25 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 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.

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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, Courtney Turner Carina Heights, Queensland, 4152, Australia

This email was sent by Courtney Turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*, however Courtney provided an email address (\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Courtney Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Danielle - Sunday, 26 May 2019 - 20:11:50

Subject	Objection to Origin's Kyalla frack site in the NT
From	Danielle Turner
Sent	26/05/2019 8:11:50 PM

### Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

### 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, Danielle Turner Tuerong, Victoria, 3915, Australia

This email was sent by Danielle Turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*, however Danielle provided an email address (\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Danielle Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Denise – Wednesday, 29 May 2019 – 20:16:26

Subject	Submission to object to Origin Energy's Environmental Management Plan for the Kyalla Drilling & Hydraulic Fracturing 2019 Program EP 117N2
From	Denise Turner
Sent	29/05/2019 8:16:26 PM

I wish to object to this plan for the following reasons:

- \* Climate Change is real and it's here. We have only 10 years to act if we are to avoid serious and irreversible climate change. We have a responsibility to reduce the impact of climate change not accelerate it.
- \*We must respect the Traditional Owners of the land. There has been no informed consent by the Traditional Owners. This is not acceptable especially when they oppose fracking on their land.
- \* Origin Energy's proposal will involve the use of dangerous chemicals. This includes the storage of millions of litres of poisoned waste water in open air tanks. It is not acceptable that Aboriginal communities and their environment be exposed to these chemicals.

Preservation of environment, communities and the future of our planet should be the priority. Drilling and hydraulic fracturing should not be approved.

# Turner, Jackie – Wednesday, 29 May 2019 – 15:09:23

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jackie Turner
Sent	29/05/2019 3:09:23 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 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, Jackie Turner Wattle Glen, Victoria, 3096, Australia

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Please reply to Jackie Turner at \*\*\*\*\*\*\*\*\*.

# Turner, Jim – Thursday, 23 May 2019 – 17:33:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Jim Turner
Sent	23/05/2019 5:33:26 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
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Yours sincerely, jim turner

This email was sent by jim turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*, however jim provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to jim turner at \*\*\*\*\*\*\*\*\*.

### Turner, Jim - Friday, 24 May 2019 - 12:01:49

Subject	Objection to Origin's Kyalla frack site in the NT
From	Jim Turner
Sent	24/05/2019 12:01:49 PM

Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

#### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

#### WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

#### TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

This email was sent by jim turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*, however jim provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to jim turner at \*\*\*\*\*\*\*\*\*.

# Turner, Kath – Thursday, 23 May 2019 – 20:15:58

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Kath Turner
Sent	23/05/2019 8:15:58 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
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Yours sincerely, Kath Turner

This email was sent by Kath Turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Kath provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Kath Turner at \*\*\*\*\*\*\*\*\*.

### Turner, Noni – Thursday, 23 May 2019 – 22:27:27

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Noni Turner
Sent	23/05/2019 10:27:27 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I completely agree with all of the objections listed below on this template: fracking has been proven already to be unpredictable and hazardous to the environment; that the Traditional Owners have not given their consent is appalling; and that you are allowing an activity which will progress rather than slow the unfolding of this terrifying change to our climate is beyond belief... Hence, 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, Noni Turner North Warrandyte, Victoria, 3113, Australia

This email was sent by Noni Turner via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Noni provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Noni Turner at \*\*\*\*\*\*\*\*\*.

### Turner, Tre – Wednesday, 29 May 2019 – 13:02:18

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Tre Turner
Sent	29/05/2019 1:02:18 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.

- 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.

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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, Tre Turner Coburg North, Victoria, 3058, Australia

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Please reply to Tre Turner at \*\*\*\*\*\*\*\*\*.

### Turpin, Roberta – Wednesday, 29 May 2019 – 11:30:10

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Roberta Turpin
Sent	29/05/2019 11:30:10 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

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Below are a list of my recommendations:

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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, Roberta Turpin Sandstone Point, Queensland, 4511, Australia

This email was sent by Roberta Turpin via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Roberta provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Roberta Turpin at \*\*\*\*\*\*\*\*\*.

### Turton, Glenn – Thursday, 23 May 2019 – 17:38:36

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Glenn Turton
Sent	23/05/2019 5:38:36 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 well-being 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 have also recently changed my gas supplier due to their actions of pursuing fracking. I strongly object to the approval of this EMP for the following reasons:

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

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Yours sincerely, Glenn Turton Cardiff Heights, New South Wales, 2285, Australia

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Please reply to Glenn Turton at \*\*\*\*\*\*\*\*\*.

### Tutton, Harper – Wednesday, 29 May 2019 – 16:25:46

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Harper Tutton
Sent	29/05/2019 4:25:46 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.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

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Yours sincerely, Harper Tutton

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Please reply to Harper Tutton at \*\*\*\*\*\*\*\*\*.

### Tutton-Gill, Poppy – Wednesday, 29 May 2019 – 18:29:26

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Poppy Tutton-Gill
Sent	29/05/2019 6:29:26 PM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
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Yours sincerely, Poppy Tutton-Gill Brunswick East, Victoria, 3057, Australia

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Please reply to Poppy Tutton-Gill at \*\*\*\*\*\*\*\*\*.

### Twaddell, JA – Wednesday, 29 May 2019 – 16:13:05

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	JA Twaddell
Sent	29/05/2019 4:13:05 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, JA Twaddell

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Please reply to JA Twaddell at \*\*\*\*\*\*\*\*\*.

### Tweed, Doug - Thursday, 23 May 2019 - 20:35:59

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Doug Tweed
Sent	23/05/2019 8:35:59 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, Doug Tweed Woodbridge, Western Australia, 6056, Australia

This email was sent by Doug Tweed via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Doug provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Doug Tweed at \*\*\*\*\*\*\*\*\*.

### Tybalt, Zach – Thursday, 30 May 2019 – 02:43:11

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2
From	Zach Tybalt
Sent	30/05/2019 2:43:11 AM

Fossil fuel reserves need to be kept locked within the Earth if we are to stand a chance of surviving as a species.

With just five years to reduce emissions any new extraction is an extremely shortsighted signing of a death warrant.

Emissions aside the risks of environmental destruction on the continent leading the world in deforestation and species extinction is also pretty stupid.

When you factor in permanent contamination of precious fresh water reserves these proposals are a no brainer.

Do you really want to be associated with the extermination of life on planet Earth? Enough is enough and these proposals have no place in Earth's or humanities future. If you are at all serious about sustaining life on Earth these proposals have to be shelved and more sustainable investment needs to be brought to the fore in its place.

Zach Tybalt
\*\*\*\*\*\*\*
TAS 7310

### Tychsen, Graeme – Wednesday, 29 May 2019 – 12:42:16

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Graeme Tychsen
Sent	29/05/2019 12:42:16 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.

Exxon-Mobil's 1982 and Shell's 1990s reports warn about fossil energy use.

The reporting of the supreme climate and weather authority, the US National Oceanic and Atmospheric Administration supports those companies' warnings.

However, effects are happening faster than expected.

There is no basis for preparatory fossil work for new activity.

The thought to be "impregnable" oceans are now in serious trouble.

The technical information of other submissions is damning.

Thank you for your time.

Yours sincerely, Graeme Tychsen Rankin Park, New South Wales, 2287, Australia

This email was sent by Graeme Tychsen via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*, however Graeme provided an email address (\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Graeme Tychsen at \*\*\*\*\*\*\*\*\*.

### Tyrls, Danielle - Friday, 24 May 2019 - 22:38:45

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Danielle Tyrls
Sent	24/05/2019 10:38:45 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

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Yours sincerely, Danielle Tyrls Fremantle, Western Australia, 6160, Australia

This email was sent by Danielle Tyrls via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Danielle provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Danielle Tyrls at \*\*\*\*\*\*\*\*\*.

# Tyrrell, Dave - Wednesday, 29 May 2019 - 11:58:19

Subject	Objection to Origin Energy's Environmental Management Plan for the Kyalla Drilling
	and Hydraulic Fracturing 2019 Program EP117 N2
From	Dave Tyrrell
Sent	29/05/2019 11:58:19 AM

I strongly object to Origins plans to start fracking in the Northern Territory. Please do not grant them approval for an exploration well.

Regards

Dave Tyrrell Byron Bay NSW 2481

# Tysoe, Eliza – Friday, 24 May 2019 – 10:05:56

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Eliza Tysoe
Sent	24/05/2019 10:05:56 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

Re: Objection to Origin Energy's Environmental Management Plan (EMP) for the Kyalla Drilling and Hydraulic Fracturing 2019 Program EP117 N2

Thank you for the opportunity to make a submission regarding this issue.

I write this submission to ask the Department of Environment and Natural Resources to outright reject Origin Energy's EMP to protect the land, water, health and wellbeing of impacted communities as well as our shared future from climate change.

- 1. Approval of this EMP will lead to irreversible climate change impacts for people of the Northern Territory and beyond. The Northern Territory is already experiencing the impacts of climate change, and is predicted to be one of the most severely impacted if emissions are not rapidly reduced [1]. Remote Aboriginal communities across the NT feel this first and worst: extreme heat waves, water shortages and more extreme flooding could force many Aboriginal people to move off their country. Approving this EMP, one of nine exploration wells, would signal the Beetaloo Basin as "open for business" to the expansion of the gas industry, potentially leading to emissions 20 times Australia's total current annual emissions [2]. This would pose a serious climate change threat to communities across the NT and beyond.
- 2. Storage of wastewater in open air tanks poses unacceptable risks and is incompatible with the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (Inquiry) recommendation 7.12 that stated "enclosed tanks must be used to hold all wastewater." [3] Climate change means that seasons and weather patterns are changing, particularly across the NT in relation to wet season (Oct 2018 to April 2019 was the driest wet season since 1992 and the hottest wet season on record) [4]. This means that there can be big storms out of season, and having open tanks with fracking wastewater (at any time of the year) would put drinking water, wildlife and health of community members and children at risk, including communities up and downstream.
- 3. Origin Energy have failed to appropriately consult with all Traditional Owners, Aboriginal people and impacted communities. A report from the Jumbunna Institute for Indigenous Education and Research (UTS) found that most, if not all, exploration permits issued in the Northern Territory (including Origin Energy) for unconventional gas were issued in the absence of Free, Prior and Informed Consent from Traditional Owners [5]. Furthermore, the Inquiry found that Aboriginal communities overwhelmingly opposed fracking on their land. The findings from the UTS report suggest reasons for concerns regarding all of Origin Energy's consultation practices, including consultation regarding this Environmental Management Plan with all Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas impacted both directly and indirectly.

For these reasons, any plans for drilling and hydraulic fracturing, including exploration, should not be allowed to go ahead under any circumstances.

Below are a list of my recommendations:

- 1. The DENR should take a precautionary approach to the cumulative climate impacts of this exploration well knowing the risk of the expansion of the gas industry in the Northern Territory will have dangerous and irreversible impacts on our climate in a time when we need to rapidly decarbonise the global economy and energy system.
- 2. All waste water should be held in enclosed tanks at all times.
- 3. We request that additional time, including a consultation period and process, is allowed for Traditional Owners, Aboriginal communities and appropriate cultural authorities for the areas directly and indirectly impacted by this EMP to consider this information and be given a fair chance to ask questions and respond.
- 4. All chemicals must be adequately health tested before being used in any fracking processes. They should also require companies to publicly disclose the identities and Chemical Abstracts Service numbers of chemicals that are manufactured commercially, and identify oil and gas wells in which the chemicals are used.

I write this submission in support of many Aboriginal communities across the Northern Territory, primarily within the Beetaloo region, who are concerned about the potential damages that fracking could cause to water, to country, to songlines as well as the long term effects of climate change.

- [1] The Australia Institute "Cooked with gas" 2018 http://www.tai.org.au/sites/default/files/P510%20Cooked%20with%20gas%20-%20Darwin%20days%20over%2035C%20FINAL.pdf
- [2] The Australia Institute "NT gas compared to coal-fired power plants" http://www.tai.org.au/content/nt-gas-compared-coal-fired-power-plants
- [3] Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory 2018 https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286
- [4] Bureau of Meteorology "Seasonal Climate Summary for Northern Territory" http://www.bom.gov.au/climate/current/season/nt/summary.shtml
- [5] Jumbunna Institute for Education and Research "Hydraulic Fracturing and Free, Prior and Informed Consent in the Northern Territory: A Literature Review "https://accr.org.au/wp-content/uploads/Jumbunna-FPIC-review-final.pdf

Yours sincerely, Eliza Tysoe Pymble, New South Wales, 2073, Australia

This email was sent by Eliza Tysoe via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Eliza provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Eliza Tysoe at \*\*\*\*\*\*\*\*\*.

# Tysoe, Kate - Monday, 27 May 2019 - 19:30:12

Subject	Objection to Origin's Kyalla frack site in the NT
From	Kate Tysoe
Sent	27/05/2019 7:30:12 PM

#### Dear Onshore Gas division,

I am writing to express my objection to the Environmental Management Plan submitted by Origin Energy for the Kyalla frack site in the Northern Territory.

My key concerns with this plan are outlined below.

#### FRACKING SUBSTANCES ARE POISON

The fracking chemicals Origin plans to use are harmful to health. The list of substances Origin want to use have known health impacts. An independent review of the substances shows they are linked to: acute toxicity, respiratory irritation, tissue damage, burns, and cancer. Some are very toxic to aquatic life with long lasting effects.

Plus there are 'trade name' fracking chemicals that do not have any health data available.

#### OPEN AIR WASTEWATER TANKS POSE UNACCEPTABLE RISK

It is unacceptable that Origin would use open air wastewater dams or 'tanks' to store the toxic flowback fluid.

This flowback and drilling fluid is full of nasties including heavy metals, fracking chemicals and naturally occurring radioactive materials.

Evaporation pits and open toxic tanks pose a risk to the incredible threatened birdlife that visits the site, including the Gouldian Finch, and should not be open and accessible to birdlife at any time.

#### WET SEASON RISKS WITH WASTE ON SITE

It is deeply concerning that instead of storing toxic wastewater in enclosed tanks, Origin are planning open dams all through the wet and dry seasons. Not only could this kill birds, but extreme weather events could cause downstream pollution impacts.

Origin's site is upstream of Lake Woods, a place of international significance for biodiversity. The catchment should be off limits to fracking.

#### TRANSPORT RISKS AND TOURISM IMPACTS

Origin says they care about cumulative impacts, but have failed to talk to tourism operators about the risks of increased traffic on the Stuart Highway, or to people living downstream from their fracking exploration activities.

Plus, Origin want to dump on Queensland and truck the toxic waste to an undetermined site. Already Queensland has millions of tonnes of toxic salt waste that there is no permanent disposal solution for. This is unacceptable.

#### BUSHFIRE RISKS AND TOTAL FIRE BAN DAYS

This area is sensitive to bushfires. Rural Fire Brigades have been calling for gas companies to stop ignition sources and flaring on total fire ban days. Origin must be made to stop all flaring on total fire ban days.

Thank you for considering my concerns.

Yours sincerely, Kate Tysoe Woy Woy Bay, New South Wales, 2256, Australia

This email was sent by Kate Tysoe via Do Gooder, a website that allows people to contact you regarding issues they consider important. In accordance with web protocol FC 3834 we have set the FROM field of this email to our generic no-reply address at \*\*\*\*\*\*\*\*\*\*\*\*, however Kate provided an email address (\*\*\*\*\*\*\*\*\*\*) which we included in the REPLY-TO field.

Please reply to Kate Tysoe at \*\*\*\*\*\*\*\*\*.

# Tysoe, Matt – Friday, 24 May 2019 – 00:56:40

Subject	Re: Objection to Origin Energy's Environmental Management Plan (EMP)
From	Matt Tysoe
Sent	24/05/2019 12:56:40 AM

To whom it may concern at the Department of Environment and Natural Resources (DENR),

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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, Matt Tysoe West Pymble, New South Wales, 2073, Australia

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Please reply to Matt Tysoe at \*\*\*\*\*\*\*\*\*.