

Remediation (NZ) Limited Resource Consent Applications to Taranaki Regional Council

To discharge contaminants to water or land and air (5838, 5389)

1. Taranaki Energy Watch (TEW) is a grass roots community group supporting communities to protect their health and environment from the effects of oil and gas exploration and production in Taranaki and New Zealand.
2. Remediation (NZ) Ltd have applied for renewal of consents for a composting/ vermicasting facility in the Uruti Valley in New Plymouth District. They propose to continue to remediate drilling waste and produced water at the site. Taranaki Regional Council (TRC) have publically notified the application. ¹
3. The application by Remediation (NZ) Ltd to the Taranaki Regional Council is to renew the following discharge permits: ^{2 3}
 - (i) Consent 5838 - To discharge of a) waste material to land for composting; and b) treated stormwater and leachate, from composting operations; onto and into land in circumstances where contaminants may enter water in the Haehanga Stream catchment and directly into an unnamed tributary of the Haehanga Stream
 - (ii) Consent 5839-2 - To discharge emissions into the air, namely odour and dust, from composting operations
4. TEW are submitting on both of the consents.

¹ <https://www.trc.govt.nz/council/news-and-events/public-notice/>

² <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/AEE/2RemediationAEE-revised.PDF> p.5

³ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/AEE/4AEE-AppendixB.PDF>

5. Application for discharge permit (5358)

(i) Acceptable wastes (Conditions 2,3 and 4)⁴

(a) TEW are concerned that well workover fluids, hydraulic fracturing fluids (at times used as a well workover fluid), and produced water should not to be disposed of at this site. The Parliamentary Commissioner for the Environment (PCE) stated that these types of contaminants be disposed of through deep well injection.⁵

(b) Both Ministry for Primary Industries and Land Care Research recommend testing for radioactivity with drilling waste for land farming to ensure that it is at an acceptable level. This approach is relevant for composting drilling waste and should be included in the waste management of the Uruti site.^{6 7}

(c) TEW recommend the following changes to the consent conditions:

2. ~~Produced water from hydrocarbon exploration~~
3. Verification that NORM are not present (e.g. results of screening for radioactivity of muds or scale, which are expected to have higher radioactivity)
4. Material produced as a result of a dissolved air flotation process, well workover fluids, hydraulic fracturing fluids, and produced water shall not be accepted on site.

(ii) Composting

(a) TEW are concerned with the fate of the drilling waste and are not satisfied with the information provided in the application, the existing resource consents and the Council environmental monitoring reports on this matter.

⁴ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/2Furtherinformation-AppendixC.pdf> p.4

⁵ <https://www.pce.parliament.nz/media/pdfs/PCE-OilGas-web.pdf> pp.58-61

⁶ <file:///C:/Users/Educator/Downloads/MPI-Guidance-on-spreading-rocks-and-minerals-on-land-web.pdf> p.8

⁷ https://www.landcareresearch.co.nz/science/soils-and-landscapes/environmental-contaminants/LC2161_land_application_of_waste.pdf p.15

- (b) It is TEW's understanding that the Uruti facility (Remediation (NZ) Ltd) operates as an organic facility (Revital)^{8 9} and is receiving and remediating drilling wastes that includes synthetic drilling waste at the site. Remediation NZ Limited is trading as Revital. Remediation NZ appears to supply both organic materials as well as non-organic materials to the public. It is not clear what these organic and non-organic materials are, in what quantities, where they go to, and if they have been derived from drilling waste.¹⁰
- (c) The Assessment of Environmental Effects indicates that the drilling waste is composted at Drill Mud Pad (Pad 3) and fluids drain to irrigation areas and that the compost is to be used on the site as compost/soil conditioner.¹¹ It is not evident in the application where the composted/soil conditioner materials are used on the site. There appears to be contradictory information in Taranaki Regional Council environmental monitoring reports referred to in (i), (ii) and (iii) as to the fate of the drilling waste.
- (i) The Remediation NZ Ltd Monitoring Programme Annual Report 2014-2015 states "3.2.2 Pennington Road and Waitara Road Sites...The sites are now used purely as worm farms fed with composted materials from the Mokau Road site. As RNZ no longer incorporates drilling wastes directly into the worm food in situ at the worm farms, this greatly reduces the likelihood of any environmental effects".¹² TEW is concerned drilling waste is possibly in the composted materials from the Mokau Road site.
- (ii) The Remediation NZ Ltd Monitoring Programme Annual Report 2015-2016 states "Remediation (NZ) Ltd operates a composting facility in the Haehanga Valley, Uruti. Raw materials are trucked to the site for composting, on purpose built composting pad for a period of 35-40 days. Synthetic

⁸ <http://revital.co.nz/>

⁹ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/22Furtherinformatoin-AppendixR.pdf>

¹⁰ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/22Furtherinformatoin-AppendixR.pdf> pp. 10-12

¹¹ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/AEE/2RemediationAEE-revised.PDF> p.16; p.21

¹² <https://www.trc.govt.nz/assets/Documents/Environment/Monitoring-Industry/MR2015-RemediationNZ.pdf> p.43

hydrocarbon drilling muds and cuttings are also received on site. They are piled up and liquids are allowed to drain, then blended with green waste and other organic matter. Composted material is transported off site by trucks to RNZ's worm farming operations at Waitara Road and Pennington Road."¹³

(iii) The Remediation NZ Ltd Monitoring Programme Annual Report 2016-2017 states "Specifically, material contained within the drilling mud pad is proposed to be mixed and blended with associated material, as outlined in the renewal of consent documentation undertaken in 2010. It is then proposed to be stockpiled in rows for composting. It is then processed through the vermiculture process. Moving forward, further information as to the fate of this material is required".¹⁴

(d) It is noted there are "significant quantities of oil and gas waste received"¹⁵ however there appears to be no analysis of how the site will process this at the Drill Mud Pad (Pad 3) in a way that allows for required endpoints to be reached before more composting of drilling waste needs to occur. How is excess drilling waste managed? Does stockpiling of drilling waste occur at the site before mixing and if so where?

(e) TEW have a number of further questions. Where is the material composted? Is composted material processed through the vermiculture process? If so where does this material then go?

(iii) Drilling waste end points for composted materials

(a) An example of testing for the final product of the composted material is provided with the application. It appears only total petroleum hydrocarbons (TPH) are tested for.^{16 17} They do not test for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAH) as required when the drilling waste comes to the site.

¹³ <https://www.trc.govt.nz/assets/Documents/Environment/Monitoring-Industry/MR2016-RemediationNZ.pdf> p.32

¹⁴ <https://www.trc.govt.nz/assets/Documents/Environment/Monitoring-Industry/MR2017-RemediationNZ.pdf> p.38

¹⁵ <https://www.trc.govt.nz/assets/Documents/Environment/Monitoring-Industry/MR2017-RemediationNZ.pdf> p.41

¹⁶ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/10Furtherinformation-AppendixH1.PDF>

¹⁷ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/11Furtherinformation-AppendixH2.PDF>

- (b) It is not clear why the final product is tested for multi-pesticide residues as this is not part of the consent conditions.¹⁸
- (c) Module 4 Tier 1 soil acceptance criteria are provided in Appendix H3 however they only include the contents pages and the table related to the inhalation pathway (Table 4.16)¹⁹.
- (d) A presentation to the Council refers to Table 4.15 Agricultural Use end points for TPH Silty Clay only.²⁰
- (e) TEW recommend to have end points for the composting material similar to that supported by Ministry for Primary Industries and Landcare Research for land farms particularly as it is not clear where the composted materials are moved to.^{21 22} Testing for benzene, toluene, ethylbenzene, and xylenes (BTEX); polycyclic aromatic hydrocarbons (PAH); and heavy metal should occur as well.

(iv) Hay and silage and crops from the irrigation area

There is incomplete information provided about hay, silage and crops and the specifications they should meet. Similarly to composting there should be required endpoints for hydrocarbons in the irrigation area before hay, silage or cropping should occur.

“Standing Hay or Silage Grass suitable for processing into silage or hay is sold on a standing basis to Agricultural contractor and Farmers. Before standing hay or silage can be approved for sale it must pass/meet the following specifications.....

¹⁸ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/10Furtherinformation-AppendixH1.PDF>

¹⁹ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/12Furtherinformation-AppendixH3.PDF>

²⁰ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/Remediation-TRCPresentationOct2019.pdf> p.12

²¹ <file:///C:/Users/Educator/Downloads/MPI-Guidance-on-spreading-rocks-and-minerals-on-land-web.pdf> p.9

²² https://www.landcareresearch.co.nz/science/soils-and-landscapes/environmental-contaminants/LC2161_land_application_of_waste.pdf pp.17-23

3.4 Hay and silage Hay or silage is harvested from the irrigation areas for sale. Before hay or silage can be approved for sale it must pass/meet the following specifications.

3.5 Crops”²³

(v) Issues with bunding

The environmental monitoring report (2016-2017) identified that “a future requirement in relation to the drilling mud pad and the associated settling ponds, is that the bund height should be increased. This was identified in the previous monitoring period and has been regarded to management since this date”.²⁴ It is not clear that this has been addressed. Bunding information could be provided through consent conditions.

6. Application for discharge permit (5359)

Composting of large amounts of drilling wastes is a potentially significant source of fugitive discharges to air (i.e. through volatilisation of hydrocarbons). Fugitive discharges to air are not combusted and thus reflect the product or raw gas being extracted. The primary contaminants of concern are BTEX compounds (i.e. benzene, toluene, ethylbenzene and xylene), polycyclic aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs). This is not addressed in the application or the existing resource consent.

²³ <https://www.trc.govt.nz/assets/Documents/Environment/Consent-applications/Remediation2019/FurtherInfo/9Furtherinformation-AppendixG.pdf> p.8

²⁴ <https://www.trc.govt.nz/assets/Documents/Environment/Monitoring-Industry/MR2017-RemediationNZ.pdf> p.38