

Notice

Environmental Protection Act 1994

Clean-up Notice

This clean-up notice is issued by the administering authority pursuant to section 363H of the Environmental Protection Act 1994 to advise you of a decision requiring you to take the stated action in regard to a contamination incident.

Viva Energy Australia Pty Ltd (ACN 004 610 459)
Level 16, 720 Bourke Street
DOCKLANDS, VIC, 3008

cc. McDonald's Australia Limited
21 Central Avenue
THORNLEIGH NSW 2120

Your reference: Coles Express Deception Bay J512

Our reference: C-CPLO-100001761 E-100256332

26 October 2022

Take notice: that under section 363H of the *Environmental Protection Act 1994* (the Act) a clean-up notice is issued to Viva Energy Australia Pty Ltd (ACN 004 610 459) (Viva Energy/you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Science (the department).

The clean-up notice is issued in respect to the activities of Viva Energy Australia Pty Ltd at the Coles Express service station Deception Bay on land described as Lot 11 on RP892855 situated at 376 Deception Bay Road, Deception Bay Queensland 4508 (the premises) and Lot 10 on RP892855 situated at 362 Deception Bay Road, Deception Bay owned by McDonalds Properties Australia Pty Ltd ACN 008 496 928 (now registered as McDonalds Australia Limited) (McDonald's), and occupied by a McDonalds Family restaurant (the McDonald's site).

A. Grounds

The clean-up notice is issued on the following grounds:

1. Pursuant to section 363G of the Act, the administering authority reasonably believes that you are a prescribed person for a contamination incident.
2. The contamination incident involves:
 - a) contamination of the environment that the administering authority is satisfied has caused, or is likely to cause, serious or material environmental harm; and
 - b) the carrying out of an activity on contaminated land and a change in the condition of contaminated land that the administering authority is satisfied has caused, or is likely to cause, the land or any other land to become contaminated land.

The facts and circumstances forming the basis for these grounds are:

Premises

3. The premises is listed on the Queensland Government Environmental Management Register (EMR Site ID: 35920) for both operating a commercial service station and being subject to the following hazardous contaminants: TRH (C16-C34), TRH F1 & F2 in groundwater - Benzene, Toluene, Ethylbenzene, Xylenes, Naphthalene and Phenol.
4. On 19 June 2017 the department listed the McDonalds site on the Queensland Government Environmental Management Register (EMR Site ID: 18824) for presence of hazardous contaminant 'petroleum hydrocarbons' including benzene and ethylbenzene based on risk to public health and safety and the environment.

Activity and Occupier

5. You are a currently registered Australian proprietary limited company (ACN 004 610 459) as defined under section 45A(1) of the *Commonwealth Corporations Act 2001*.
6. Viva Energy Australia Pty Ltd (Viva Energy/the lessor) (formerly the Shell Company Australia ACN 004 610 459) acquired the premises in 1993 and it is reported the service station activity has been operated by Viva Energy since 1993.
7. The title for the premises has identified a lease, Dealing Number 707638510 (the lease), between Viva Energy and Eureka Operations Pty ACN 104 811 216 (Eureka/the lessee) commencing 2 February 2004 until 28 April 2024.
8. The lease in section 3.2 requires that the lessee uses the fuel equipment in accordance with the manufacturers, suppliers and/or Viva Energy's instructions for use as notified by Viva Energy and as set out in the site procedures manual from time to time, and that the lessee only stores in, or dispenses only Viva Energy petroleum products through the fuel equipment.
9. The lease in section 5.2 further requires that lessor must keep the fuel equipment maintained and in good repair and condition to the standard and in accordance with Viva Energy maintenance, repair and replacement obligations set by you in the asset maintenance schedule of the lease.
10. Viva Energy is the person who released a hazardous contaminant contaminating the land, because it was in control of the fuel equipment that failed, including the equipment failures that occurred during lease of the premises to Eureka as set out in the terms of the lease.
11. Viva Energy Australia Pty Ltd is a registered suitable operator under the Act, suitable operator reference number 531960.
12. The current registered landowners of the premises are VER Custodian Pty Limited.

Contamination Incident

13. The contamination incident is the release of petroleum hydrocarbons causing contamination of groundwater, and soil vapour by dissolved phase hydrocarbons at the premises and McDonald's site.
14. The '*Detailed Site Investigation Report, Coles Express Service Station, 376 Deception Bay Road, Deception Bay, QLD 4508*', by AECOM dated 30 April 2018 (AECOM Environmental Report, 2018)

indicates the presence of hydrocarbons in groundwater at the site in 2002 and that a number of likely additional sources have contributed to the contamination including:

- a) in November 2006, where Tanks 1 and 4 and suction line numbers 7 and 8 failed testing; and
 - b) in 2008, where a line failure was identified in the most northerly bowser that was subsequently replaced; and
 - c) during the period between October 2014 to February 2015 where Tank 3 repeatedly failed testing and was subsequently decommissioned in February 2015. Also, during this period, decay was detected on Tank 5's vent/vapour recovery system and odour was observed in the bedding sand during replacement fill line work for Tank 5.
15. Reported analysis of historical groundwater monitoring results indicated elevated hydrocarbon concentrations in the groundwater during the period of 2006-2008 and 2014-2015 which correlate with the time of these infrastructure issues.
16. As a result of the above equipment failures and groundwater monitoring results, the department considers that an ongoing contamination incident has occurred likely related to a number of release events prior to or in 2002, 2006, 2008 and 2014-2015.
17. The department is satisfied that the contamination incident(s) have caused or is likely to cause, serious or material environmental harm, in the form of dissolved total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, xylene, naphthalene (BTEXN) contamination of the underlying groundwater on the premises.

Prescribed Person:

18. You are the prescribed person for the contamination incidents pursuant to section 363G of the Act because:
- a) you were the person in causing or permitting, or who permitted, the incident to happen, because you were the owner of the contaminant and in control of the of the fuel equipment the contaminant was stored in at the premises at the time of the incidents; and
 - b) you caused or permitted the incident to happen, by failing to contain the petroleum products in storage and/or transfer activities in the fuel equipment at the premises.
19. You are the prescribed responsible person for the contamination incident pursuant to section 363F paragraph (b) of the Act because:
- a) Light Non-aqueous Phase Liquid (LNAPL) and dissolved phase hydrocarbons are hazardous contaminants under the Act due their toxicity in aquatic environments and risks associated with public safety and amenity from presence of contaminants in groundwater and soil vapour; and
 - b) the administering authority is satisfied that the change in the condition of contaminated land has caused the McDonald's site to be become contaminated land and resulting in its listing on the Queensland Government Environmental Management Register (listed on 19 June 2017, EMR Site ID: 18824) for presence of hazardous contaminant 'petroleum hydrocarbons' including benzene and ethylbenzene based on risk to public health and safety and the environment; and
 - c) you are the person who released the hazardous contaminants to land on the premises because you own fuel and maintain the fuel equipment at the premises.
20. Viva Energy was landowner and the lessor of the premises during the incident(s) and owned the contaminant and responsible for maintenance of the fuel equipment involved in the contamination incidents.

Environmental Harm:

21. On 18 September 2014 Environmental Resources Management Australia Pty Ltd (ERM) submitted on your behalf, a duty to notify environmental harm to the department accompanied by the report '*Groundwater and Soil Vapour Monitoring Event, Q3 2013 Shell Coles Express Deception Bay Service Station, Corner of Deception Bay Road and Park Road, Deception Bay QLD Australia, The Shell Company of Australia Limited Final, dated December 2013*', prepared by ERM ('ERM Report 2013').
22. On 14 September 2017, the department issued a notice to conduct or commission an environmental investigation (EE) reference STAT1155 to Viva Energy. The findings/evidence contained in the further report '*Q2 2016 Groundwater monitoring Event and soil Vapour monitoring Event, Coles Express Service station, 376 Deception Bay Road, Deception Bay QLD, 4508*' dated 29 June 2016 by AECOM, that supported the grounds for the EE.
23. On 2 May 2018 the department received an email from AECOM Australia Pty Ltd titled '*Submission of a contaminated land investigation document - Coles Express Deception Bay*'. The submission included the '*AECOM Environmental Report, 2018*'.
24. The Contaminated Land Auditor (CLA) certification of the contaminated land investigation document (CLID) for the site investigation report (the AECOM environmental report, 2018) recommended ongoing monitoring of the premises and development of a Remediation Action Plan for implementation.
25. On 4 October 2018 the department issued you with a clean-up notice STAT1290 requiring further monitoring, development of remedial options, and a requirement that you consult with McDonald's about options to develop a Remediation Action Plan to meet the following clean up objectives/requirements (in requirement 6 of clean up notice STAT1290):
 - a) Reinstatement of all groundwater values scheduled under the Environmental Protection Policy (Water) Policy 2009 (aquatic ecosystem, irrigation, farm supplies, stock water, drinking water) beyond the boundaries of the service station premises; and
 - b) Implementation of a hydraulic containment or recovery measure to prevent any future contaminant migration from the premises; and
 - c) Achieves methane in soil vapour of less than 1.25% volume/volume at all soil vapour monitoring locations SVMW1, (to be reinstated SVMW2) and SVMW3 identified on Map F2 AECOM 2018 and newly installed soil vapour monitoring locations; and
 - d) Achieves the requirements of table 1A (5) residential use (on the basis that the commercial guidance does not consider the use of the site by young children) for soil vapour levels health screening levels (HSL) for vapour intrusion for toluene, ethylbenzene, Xylenes, Naphthalene, benzene F1, and F2; and
 - e) Consult with and obtain agreement by the owner of the McDonalds site (Lot 10 on RP892855) regarding the remediation plan.
26. On 9 August 2019 AECOM submitted via email the following documents
 - a) Remedial Plan titled '*Remediation Options Assessment Lot 10 and 11 on RP892855, 362 Deception Bay Deception Bay, Queensland*' (the premises) for Viva dated 2 August 2019 by AECOM ('AECOM RAP')

- b) *Viva Energy Australia Pty Ltd Contaminated Land Auditor Services Viva Energy Deception Bay Auditor Review of Remediation Options Assessment* dated August 2019 by GHD
- c) *Interim Contamination Management Plan (CMP) DATE: 6 August 2019 Lot 10 on RP892855 EMR ID: 18824* prepared by AECOM.
27. The CMP for the McDonald's site identifies presence of hazardous contaminants in soils and groundwater within Lot 10 on RP892855 (section 2.2). Further, it states that
- a) Excavated soil from the impacted area (Figure F2 of the CMP) must be treated as contaminated by a hazardous contaminant; and
 - b) Excavated soil from the remainder of the McDonald's site must be assessed for potential hazardous contaminants of concern to determine if the material is contaminated; and
 - c) Representative sampling and analysis of the material from excavations in contaminated areas must be managed by a suitably qualified and experienced person in accordance with section 565 of the Act. Excess and/or contaminated soil must not be removed offsite without a disposal permit in accordance with section 424 (as continued under s.739) of the Act.
 - d) Section 3.8 of the CPM states groundwater extraction and use is prohibited on the McDonald's site, with the exception of groundwater monitoring activities until remediation activities are completed and verified by the department.
28. On 30 August 2019 the department issued you correspondence which outlined a number of concerns with the AECOM RAP that recommended soil vapour extraction, and enhanced bioremediation. These concerns included the long-time frame (up to 10 years) to reach the departmental prescribed remedial objectives, and Viva's failure to consult with McDonald's as an affected landowner about the remedial options (as required by clean-up notice STAT1290). The department acknowledges that you have taken steps to engage with McDonalds about the remediation planning over 2021.
29. On 17 October 2019 McDonald's notified the department of its concerns with AECOM RAP. These concerns are not limited to, but include the following:
- a) Lack of a cut off wall on the upgradient boundary of the McDonald's site to address contaminant migration risk; and
 - b) That the enhanced bioremediation approach seems minimalistic to reduce the contamination and that other soil vapour monitoring events may be required; and
 - c) The CMP is written such that McDonald's is responsible for providing background information and advice to any person or any entity who will conduct excavation work within the contaminated area, and are of the view that Viva should service any advice to third parties working at the McDonald's site.
30. On 20 April 2020, Viva advised the department via email that it was delaying remediation commencement and monitoring due to COVID 19 impacts, with a review of the situation to occur in September 2020, and attached the following:
- a) *Contamination Management Plan Bi-annual Monitoring Event Report*, dated 19 Dec 2019; and
 - b) *Soil Vapor Extraction (SVE) Pilot Trial* dated 17 January 2020.
31. On 27 August 2020 AECOM submitted a 'draft' *Contamination Management Plan Bi-annual Monitoring Event factual Report* via email dated 17 August 2020. This reported groundwater, soil vapour and indoor air monitoring results, concluding that no unacceptable risk has been identified for complete pathways for groundwater and soil vapour at the McDonald's site.

32. On 22 April 2021 Viva Energy submitted a memo via email from ERM, dated 21 April 2021 outlining a proposed remedial approach based on the introduction of amendments into the groundwater to enhance naturally occurring petroleum hydrocarbon reductive process. This included the proposed location of a series of wells within and along the boundary of the premises to minimise disruptions to McDonald's operations, so you could proceed with remediation without delays obtaining an access agreement to the McDonald's site.
33. On 22 July 2021 in a meeting, Viva Energy representatives (including ERM) advised departmental representatives that ERM on behalf of Viva Energy:
- a) propose a staged approach to conduct the injection and monitor the petroleum reductions, and that assessment on other options can be considered if further remediation is required to reduce the concentrations further;
 - b) propose further assessment on feasibility and suitability of a physical barrier (to block potential future contaminated groundwater from flowing into the McDonalds site) and options to manage future monitoring and access; and
 - c) indicated that reinstatement of scheduled groundwater values under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (EPP Water) may not be possible due to the McDonalds site limitations (limiting any interruption to 24 hours operations), although the proposed remediation works can reduce the levels significantly.
34. On 9 September 2021 Viva Energy submitted a report via email titled '*Groundwater and Soil Monitoring Vapour Monitoring, Coles Express Service station, 376 Deception Bay Road, Deception Bay QLD (J451)*' dated 20 July 2021 by ERM ('GME, ERM 2021'). The GME, ERM 2021 contained soil vapour monitoring results and groundwater monitoring results from samples obtained in May 2021. Table 1 shows exceedances compared to relevant screening criteria and Table 2 shows soil vapour exceedances compared to health screening levels (HSL).

Table 1 – Concentrations of contaminants in groundwater (in wells MW11 and MW02) compared to relevant screening criteria (exceedances in bold)

Analyte	ANZECC 2000 Maintenance of Ecosystems Freshwater 95% (low reliability)	NEPM 2013 - GILs Freshwater	NEPM 2013 - GILs Drinking Water	Comm/Ind Modified HSL D GW for Vapour Intrusion Sand 1 m	Groundwater Bore MW11 Lot 10 RP892855 McDonalds site	Groundwater Bore MW02 Lot 11 RP892855 Viva Energy premises (May 2021)
TRH F1 µg/L				6000	3400	37,000
TRH F2 µg/L					1280	2230
Benzene µg/L		950	1	4837	3400	4700
Toluene µg/L	180		800		28	38,000
Eythylbenzene µg/L	80		300		2900	1600
m&p-Xylene µg/L		200			260	19000
o-Xylene		350			28	9600

Total Xylenes µg/L			600		290	28,000
Naphthalene µg/L		16			30	270

NEPM 2013 - GILs Freshwater, GILs Drinking Water: NEPC 2013, National Environment Protection (Assessment of Site Contamination) Amended Measure - Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater
ANZECC 2000 - Maintenance of Ecosystems Marine water 95%, low reliability; Short Term Trigger Value in Irrigation Water
CRC CARE 2011 - Modified HSLs using CRC Care Extension Model

Source: GME, ERM, 2021.

Table 2 Table 2: Hydrocarbons and volatile organic compounds (VOCs) in soil vapour on the boundary of the premises and the McDonalds site, and the McDonald's site drive thru (exceedances in bold).

Chemical	NEPM 2013 Soil Vapour HSLs D for soil vapour intrusion - Sand 0 to <1 m	CRC CARE 2013 Chronic Air Guidelines (Table C1) ^d	SVMW02a date (May 2021) on the Viva Energy premises, immediately adjacent to McDonalds	SVMW03 (May 2021) Off site in the McDonalds drive thru.
C6-C10 fraction (minus BTEX)(F1) ^A mg/m ₃	680		>50 000	>50 000
>C10-C16 (minus Naphthalene)(F2) ^B	500		180	310
benzene mg/m ₃	4		2610	1390
Toluene mg/m ₃	4800		510	1470
Ethylbenzene mg/m ₃	1300		1390	1100
Total Xylenes mg/m ₃	840		870	2200
Naphthalene mg/m ₃	3		<5.588	<5.290
Trimethylbenzenes mg/m ₃		44	84 + 37 (121)	170 + 77 (247)
Cyclohexane mg/m ₃		1200	3410	2750
Heptane mg/m ₃		5200	2500	2040
Hexane mg/m ₃		140	5020	2670
Methane mg/m ₃			-	-

A F1 concentration taken as (Aliphatic >C5-C6 + >C6-C8 aliphatic + >C8-C10 aliphatic + >C8-C10 aromatic) – BTEX

B F2 concentration take as (Aliphatic >C10-C12 + Aromatic >C10-C12) - Naphthalene

C guideline available for aromatic >C10-C16 only

D indoor air attenuation of 200 has been applied to the guideline (CRC CARE 2013)

- not analysed

Source: GME, ERM 2021).

35. The conceptual site model contained in GME, ERM July 2021 report indicates the following potential exposure pathways for contamination sources at the premises and McDonald's site:

- a) Vapour inhalation off-site commercial workers and users of the McDonalds site immediately to the west of site;
- b) Vapour inhalation during intrusive activities on the premises and the McDonalds site by intrusive workers (in shallow trenches);
- c) Direct contact with hydrocarbon impacted groundwater during intrusive / maintenance activities, as the depth of groundwater is <2 metres below ground level; and
- d) Users of abstracted groundwater is unlikely to be complete, based on no active registered bores are located within 500 metres of the premises.

36. McDonald's has advised the department it is planning redevelopment and expansion of the restaurant drive thru, involving disturbance and excavation of soil and potential contact with groundwater at the McDonalds site. McDonald's have advised of concerns about:
- a) the length of time involved to remediate the McDonald's site;
 - b) lack of actions to prevent contamination migration from the premises;
 - c) risk of impacts from the contamination during the redevelopment activities involving disturbance of the subsurface; and
 - d) additional costs likely to be incurred by McDonald's during the redevelopment as a result of the contamination in relation to time delays, monitoring, additional processes (including obtaining soil disposal permits) and possibly soil and groundwater disposal costs etc and what role Viva Energy takes on with these additional costs.
37. Section 8.7 of the GME, ERM, July 2021, page 22 reports that '*hydrocarbons were reported at concentrations exceeding the health screening levels (HSLs) for commercial land use for an intrusive maintenance worker...*', and '*in the case the subsurface excavation is required for maintenance purposes, there are potential health risks associated with exposure to vapours and/or direct contact with shallow hydrocarbon impacted groundwater*'. ERM further reported that as a result, for any intrusive works undertaken at the premises and the McDonald's site, appropriate management and institutional controls would need to be implemented to mitigate risk to human health.
38. On 3 December 2021 Viva Energy advised via email that the access deed to enter the McDonalds site is still unresolved, and that Viva Energy proposed to proceed with a modified monitoring proposal. This advice was accompanied by documents comprising of an updated RAP, which included:
- a) '*CEXP Deception Bay Service Station (J541) Remediation Action Plan by ERM*' dated 30 November 2021 (RAP, ERM 2021);
 - b) '*CEXP Deception Bay Service Station (J541) – Addendum to Remediation Action Plan*' dated 1 December 2021; and
 - c) Tabulated Auditor Review comments – ERM RAP titled '*CEXP Deception Bay Service station (J541) Remediation Action Plan, Lot 11 RP892855*' dated 19 November 2021 Draft 3, reviewed by Contaminated land auditor on 29 November 2021.
39. The CLA review of the RAP, ERM 2021 has noted the RAP fails to meet the previous clean up notice STAT1290 objectives for the McDonald's site contamination and that ERM has revised the objectives.
40. The department understands that the RAP, ERM 2021 was developed to achieve safeguards for commercial land use consistent with the current zoning and reduce footprint of impacted groundwater, adopting a staged approach, with the initial stage not to exceed two years. Further, the RAP, ERM 2021 reports the amendment injection can occur with limited interruption to McDonald's operations, and without relying on access to the McDonald's site.
41. The RAP and RAP Addendum 0591788 Viva Deception Bay RAP Addendum_L02 Dec, 2021, (ERM RAP Addendum 2021) remediation targets seek to reduce health risks by In-Situ Chemical Oxidation (ISCO) compounds (Sodium Persulfate and calcium peroxide) within wells situated on the premises adjacent to the McDonalds site boundary.
42. The department considers crude products to be a contaminant pursuant to the Act (for example, refer the Act s.11 and *Environmental Protection Regulation 2008* schedule 9 item 1).

43. The department considers that environmental values namely public health and safety and quality of the environment, identified and declared under the EPP Water, have been adversely affected.
44. The prescribed environmental values (EV)s of groundwater and Little Burpengary Creek are prescribed in the EPP Water (refer to <https://www.ehp.qld.gov.au/water/policy/pdf/documents/caboolture-ev-2010.pdf>) and section 9 of the Act.
45. Unleaded petroleum contains short chain contaminants including benzene, ethylbenzene, toluene and xylenes which are toxic to aquatic life. Total petroleum hydrocarbon mixtures are also toxic to aquatic life (refer ANZECC 2000 water quality guidelines, section 8.3.7), which provides references to a final chronic toxicity value of µg/L total petroleum hydrocarbons (TPH). This causes environmental harm to aquatic ecosystem value and ecological health. The department acknowledges this value is below the lowest practical limit of reporting for total petroleum hydrocarbons.
46. Petroleum vapours are harmful to public safety.
47. In summary, the department considers that the contamination incident/s have caused and are likely to cause environmental harm to the premises and the McDonalds site.
48. The extent of the contamination is not trivial or negligible in nature, extent or context.
49. The environmental harm is considered at least material environmental harm in that:
 - a) it is not trivial or negligible in nature, extent or context; or
 - b) it will result in costs of more than the threshold amount (\$5000) being incurred in taking appropriate action to (i) prevent or minimise the harm; and (ii) rehabilitate or restore the environment to its condition before the harm.
50. The cost required for remediation of petroleum hydrocarbons in the groundwater underlying the premises constitutes a contamination incident that has caused material and potentially serious environmental harm for the purposes of section 363F of the Act.
51. The department considers that it is reasonable to require you to take action to develop and implement a remediation plan to rehabilitate or restore the environment because of the contamination incident/s, and to keep the department and McDonald's informed about the actions taken under this notice.

B. Requirements

1. By 9 November 2022 you must engage a **suitably qualified person(s) (SQP)** and **Contaminated Land Auditor (CLA)** to undertake the requirements of this clean-up notice.
2. From the date of this notice you must continue to implement CEXP Deception Bay Service Station (J541) Remediation Action Plan version 4.0 by ERM dated 30 November 2021 (**RAP**).
3. From 9 November 2022, remedial activities must be conducted under the supervision of the SQP (engaged under requirement 1).
4. From 9 November 2022, Viva Energy must ensure the SQP carries out any remedial activities in accordance with the RAP, including :
 - a) a sufficient number of wells to achieve the RAP short term goals (in section 7.2), including results of quarterly groundwater monitoring events (GMEs) demonstrating reductions in dissolved phase petroleum hydrocarbon to concentrations less than ASC NEPM HSL-A&B beneath both the McDonald's site and the premises; and
 - b) not less than 8 injection wells as outlined in Figure 1 of Memo to Viva Energy from ERM dated 21 April 2021 subject 'Groundwater Remediation beneath Coles Express and McDonald's'.

5. From 9 November 2022, you must monitor and report on the progress of the remedial activities including groundwater, soil vapour and indoor air quality at the frequency and for the parameters in accordance with *Table A*, below.

Table A: Monitoring Requirements

Frequency	Description / Components	Analytes / Parameters
Monthly (RPM)	Groundwater MW02, MW03, MW11, MW12, MW13, MW18	Field: pH, temperature, EC, ORP, DO, landfill gas (CH ₄ , CO, CO ₂ , O ₂ , H ₂ , H ₂ S, NH ₃). Analytical: TRH, SO ₄ , Mg.
Quarterly	Groundwater MW01, MW02, MW03, MW11, MW12, MW13, MW14, MW17, MW18, MW19	Field: pH, temperature, EC, ORP, DO, landfill gas (CH ₄ , CO, CO ₂ , O ₂ , H ₂ , H ₂ S, NH ₃). Analytical: Natural attenuation parameters (NO ₃ , SO ₄ , Fe ³⁺ , CH ₄ , Mn ²⁺) ¹ , Mg, Alkalinity (CO ₃ , HCO ₃ , OH ⁻ , total alkalinity), Anions (Cl, SO ₄), cations (Na, K, Ca, Mg) ² .
	Indoor Air (4 locations)	Analytical: BTEXN Field: landfill gas (CH ₄ , CO, CO ₂ , O ₂ , H ₂ , H ₂ S, NH ₃) ³ .
Biannually	Soil vapour, SVMW02, SVMW03, SVMW04	Field: landfill gas (CH ₄ , CO, CO ₂ , O ₂ , H ₂ , H ₂ S, NH ₃). Analytical: Volatile petroleum hydrocarbons suite (BTEXN, TRH NEPM Speciation, including F1 and modified F2), Trimethylbenzene, and permanent gases.

Notes: 1 Suite of natural attenuation parameters CRC CARE, Technical report No.15, 2010.

2 Anions/cations only required to be included for sufficient rounds of sampling in order to characterise aquifers.

3 During installation of Radiello Samplers a field screening is to be conducted in enclosed space(s)

RPM: Remedial Performance Monitoring, Mn: manganese, Na: sodium, K: potassium, Ca: calcium, Mg: magnesium, CO₃: carbonate, HCO₃: bicarbonate, OH⁻: hydroxide, Cl: chloride, SO₄: sulphate, CH₄: methane, CO: carbon monoxide, CO₂: carbon dioxide, O₂: oxygen, H₂: hydrogen, H₂S: hydrogen sulphide, NH₃: ammonia, EC: electrical conductivity. ORP: oxygen reduction potential DO: dissolved oxygen TRH: total recoverable hydrocarbons BTEXN: benzene, toluene, ethylbenzene, xylene, naphthalene.

6. You must ensure the SQP prepares, and that the CLA reviews and approves, the following reports prior to submission to the department and McDonald's by the timeframes specified in *Table B*, below.

Table B Reporting and timeframes

Reporting requirements	Timing of report submission to the department ¹
a. Interim quarterly reports (implementation of RAP and monitoring) (Requirement 7)	By 27 January 2023 all quarterly reports undertaken since implementation of the RAP must be provided. All subsequent quarterly reports must be provided by 30 August 2023 (following monitoring event # 7 as per Table 14 of the RAP).
b. Validation of short-term remedial actions and reassessed/ revised remediation plan (requirement 8)	30 August 2023

Note¹: All reports must also be issued to the property owner of Lot 10 on RP892855.

Interim reports

7. In accordance with Requirement 6 above, interim reports are to be developed providing information that includes, but is not limited to:
- a) tabulated and quality control checked monitoring results from sampling groundwater, soil vapour and indoor air as per Table A, above; and
 - b) a summary of the review of the changes in contaminant concentrations across the area of investigation; and
 - c) comparison of monitoring results against the adopted criteria as defined attachment 1 of this notice; and
 - d) assessment on the performance of the Stage 1 ISCO remedial strategy. The assessment must address the elements (in section 12.3 Review Process of the RAP) as follows:
 - a. Plateau or rebound of dissolved phase hydrocarbons in nominated performance wells in two consecutive monitoring events; and
 - b. Indoor air monitoring data indicates a potential risk to on-site workers or customers at McDonald's; and
 - c. Concentrations of dissolved phase hydrocarbons detected in monitoring wells not previously impacted (at time of baseline GME), which may indicate unanticipated migration of contaminants; and
 - d. assessment of, and inclusion of monitoring programs that targets potential preferential pathways associated with stormwater/other below ground infrastructure present on the premises and McDonald's site; and
 - e. an assessment of and include comments on indications that other parameters for e.g., by-products are in concentrations and/or locations creating a potential to cause environmental harm; and
 - f. interpretation of results to present a case for proceeding with the RAP, including identification of any deviations from or inclusions to improve the program (including additional injection wells) and/or remediation approach (and provide comment on the impact of deviations or inclusions).

Detailed Review - validation of short-term and reassessed/revised remediation action plan

8. By 30 August 2023 you must evaluate the efficacy of the remedial works carried under the RAP against the remedial objectives under the RAP and provide a report to the department and McDonald's in accordance with requirement 6 that includes but is not limited to:
- a) tabulated and quality control checked monitoring results from all sampling events; and
 - b) a comparison of monitoring results against the adopted criteria as defined in section 11.2 Screening Criteria of the RAP and Attachment 1 – screening criteria; and
 - c) a comparison of groundwater and soil vapour results against the Assessment of Site Contamination (ASC) National Environmental Protection Measure (NEPM) Health Screening Levels (HSLs) for land uses A and B; and
 - a. an assessment of the potential for further migration of contaminants from the premises to the McDonald's site and associated remedial options/controls to address potential rebound contamination; and
 - b. a reassessment of remedial options for the McDonald's site (and validation approaches) to enable removal of the land from the Environmental Management Register and that remedial options represent the available technologies; and
 - c. the reassessment of remedial options must consider all available and appropriate guidance and legislation including available technologies and approaches; and
 - d. you must consult with and obtain the views of McDonalds (and reasonably consider those views), about remedial and management options; and
 - e. addressing any CLA comments.

Notifications

9. You must notify the department and the property owner of Lot 10 on RP892855 within 24 hours of becoming aware of any monitoring result that indicates an **increased risk** of actual or potential environmental harm being caused.
10. Within 24 hours of becoming aware of any acute health and/ or safety risks, you must notify the department and any persons likely to be adversely affected by the release of contaminants, about relevant risks and measures to avoid those risks until any relevant remediation is conducted.

Quality Assurance requirements

11. All reports provided to the department related to the requirements must include:
- a) all results, measurements and data undertaken or collected as part of the investigations and/or used to inform the reports.
 - b) details of the relevant legislative, regulatory, and technical criteria on which the determinations have been based; and
 - c) the field data records and raw data on which the reporting have been based; and
 - d) Note: If deemed suitable by the SQP, all on-site data, including previous investigation data, collected by you and your consultants may be used to support the investigations, determinations and reports); and
 - e) a quality assurance assessment to ensure information used is fit for purpose.
12. All determinations of the contaminants must be performed by a person possessing appropriate experience and qualifications to perform the required measurements.
13. Records must be kept of the results of all determinations and monitoring carried out under this Clean up notice for a period of at least five (5) years.

14. You must ensure the investigations and remedial activities are conducted in accordance with —
- a) The Act; and
 - b) Environmental Protection (Water and Wetland Biodiversity) Policy 2019; and
 - c) Queensland Water Quality Guidelines (2009) — see https://qldgov.softlinkhosting.com.au:443/liberty/OpacLogin?mode=BASIC&openDetail=true&corporation=D_ERM&action=search&queryTerm=uuid%3D%22f17470cdac1304070024d1dd8c54f3fd%22&operator=OR&url=%2Fopac%2Fsearch.do
 - d) Monitoring and Sampling Manual Environmental Protection (Water) Policy 2009, Version 2, June 2018, see https://environment.des.qld.gov.au/data/assets/pdf_file/0031/89914/monitoring-sampling-manual-2018.pdf and
 - e) NEPC (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM)*. National Environment Protection Council.— see <https://www.legislation.gov.au/Details/F2013C00288>;
15. Submissions must be made in writing via email to:
- ESComplianceBrisbaneMoreton@des.qld.gov.au
- Environmental Services and Regulation – Brisbane/Moreton Compliance Office
Department of Environment and Science
Via PO BOX 808 Caboolture Queensland 4510.
16. From the date of this notice, where any potential conflict exists the Act and subordinate legislation takes precedence. If there is conflict and uncertainty with respect to the hierarchy of the remaining documents, you should document that conflict, list the uncertainty, and consult with the department with respect to the issue.
17. From the date of this notice where there is any conflict between the RAP and the requirements of this notice, the requirements of this notice take precedence.

Note:

- a. The requirements of the clean-up notice take effect immediately upon service of the notice.
- b. This notice remains in force until further notice from the administering authority.
- c. A further clean up notice may be issued to you requiring you to develop and/or implement a remediation plan associated with earthworks planned by the owner / occupier as part of site redevelopment, because you are the prescribed responsible person for the contamination. For this purpose, remediation includes review of monitoring of data, management of impacted soil and groundwater, and obtaining any soil disposal permit and other authorisations required for the management and disposal of impacted soil.

Definitions

‘Approved by CLA’ means that the documents have been reviewed and approved by a Queensland approved Contaminated Land Auditor (CLA) that the monitoring and reporting:

- is appropriate to assess site specific risks; and
- has undergone sufficient quality assurance checks; and
- completed in accordance with appropriate legislation and guidance.

‘Contaminated Land Auditor’ as defined under Chapter 12 Part 3 of the EP Act. For further information about the

requirements of a CLA, refer to the Qld Government website at <https://www.qld.gov.au/> (using 'contaminated land auditor' as the search term).

'Contaminated land NEPM' means the Environment Protection (Assessment of Site Contamination) Measure 1999, made by the National Environment Protection Council under the *National Environment Protection Council Act 1994 (Commonwealth) amended 2013*.

'Increased risk' for the purpose of this notice material change in extent or nature of contamination that you become aware of that causes or threatens environmental harm greater than, more extensive than, or of a difference from that previously identified.

'Measures' have the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency

'Monitored Natural Attenuation' means natural attenuation is demonstrated by a reduction in hydrocarbon mass and concentration over time, the presence of biodegradation by-products and the presence of hydrocarbon utilising bacteria.

'NATA' means National Association of Testing Authorities.

'RAP' means CEXP Deception Bay Service Station (J541) Remediation Action Plan version 4.0 by ERM dated 30 November 2021 (RAP, ERM 2021); DES acknowledge that monitoring undertaken under the RAP (until this notice is issued) may be modified to monitoring stated in CEXP Deception Bay Service Station (J541) – Addendum to Remediation Action Plan 1 December 2021.

'Records' include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this EPO and the EP Act.

'Remedial activities' means injection 1 and injection 2 of the RAP and the carrying out and reporting on monitoring results established under the RAP.

'Suitably qualified person' (SQP) means

- (a) For assessment of land that is contaminated or is suspected of being contaminated, the person must be a SQP pursuant to Section 549 of the EP Act. See SQP guideline https://environment.des.qld.gov.au/data/assets/pdf_file/0030/89823/cl-gl-assessing-suitably-qualified-person.pdf; and
- (b) a person or persons who has demonstrated professional qualifications, training, skills or experience relevant to the contamination and remediation that can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

'Waters' includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial water course, bed and bank of any waters, dams, non-tidal, or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater runoff, and groundwater and any part thereof.

C. Appeal rights

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the Act. Internal review of the decision to issue a clean-up notice is not available. If you are dissatisfied with the decision to issue this clean-up notice, you may apply to the relevant court for a stay of the decision to issue the clean-up notice.

A person who is dissatisfied with the decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the decision.

A person whose interests are or would be adversely affected by a decision of the department may also be able to

request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

For further information about reviews and appeals see the information sheet – Internal review and appeal to the Planning and Environment Court ([ESR/2015/1572](#)) available on the Queensland Government website at www.qld.gov.au, using the publication number (ESR/2015/1742) as a search term.

You may have other legal rights or obligations and should seek your own legal advice.

D. Access

Section 363J of the Act states: Procedure if recipient is not the owner of land on which action is required

- (1) This section applies if a clean-up notice requires the recipient to take action on land that the recipient does not own.
- (2) The recipient, or person taking the action for the recipient (the contractor), may enter the land to take the action only— (a) with the consent of the owner and occupier of the land; or (b) if the recipient or contractor has given at least 5 business days written notice to the owner and occupier.
- (3) The notice under subsection (2)(b) must inform the owner and occupier of— (a) the intention to enter the land; and (b) the purpose of the entry; and (c) the days and times when the entry is to be made.
- (4) In taking the action, the recipient or contractor must take all reasonable steps to ensure the recipient or contractor causes as little inconvenience, and does as little damage, as is practicable in the circumstances.
- (5) Nothing in this section authorises the recipient or contractor to enter a building used for residential purposes.
- (6) If a person incurs loss or damage because of action taken by the recipient or contractor, the person is entitled to be paid by the recipient or contractor the reasonable compensation because of the loss or damage that is agreed between the recipient or contractor and the person or, failing agreement, decided by a court having jurisdiction for the recovery of amounts up to the amount of compensation claimed.
- (7) The court may make an order about costs it considers just.

E. Penalties


Failing to comply with a clean-up notice is an offence unless you have a reasonable excuse.

- The maximum penalty for a corporation for wilfully contravening a clean-up notice is 31,250 penalty units, totalling \$4,307, 812.50
- The maximum penalty for a corporation contravening a clean-up notice is 22,500 penalty units, totalling \$ 3,101,625.00

If you do not comply with the clean-up notice, an authorised person may also take any of the actions stated in the notice and the department may recover from you the costs incurred in taking the actions.

Environmental Protection Act 1994
Clean-up Notice

Should you have any queries in relation to the notice, please contact Leonie Clough, Principal Environmental Officer on telephone number (07) 5316 8404.



Signature

26 October 2022

Date

Kate Grayson
Manager (Compliance)
Delegate of the Chief Executive
Department of Environment and Science
Environmental Protection Act 1994

Enquiries:
Brisbane Moreton Compliance Centre
Department of Environment and Science
Ph: (07) 5316 8404
Email: ESComplianceBrisbaneMoreton@des.qld.gov.au

Attachment 1: Screening levels

TABLE H3
TARGET AIR CONCENTRATION CORRESPONDING TO HSLs
COMMERCIAL / INDUSTRIAL USE SCENARIO (HSL-D)

CHEMICAL	TARGET AIR CONCENTRATION CORRESPONDING TO HSLs [mg/m ³]
Toluene	23.
Ethylbenzene ^(a)	5.9
Xylenes	4.
Naphthalene ^(a)	0.014
Benzene ^(b)	0.018
C6-C10	3.2
>C10-C16	2.3

Notes:

- (a) Ethylbenzene and naphthalene are Group 2B (possible carcinogenic to humans) by IARC, however slope factors have yet to be published by US EPA IRIS and WHO. Therefore HSL is based on threshold endpoints and is subject to change in the future.
- (b) Based on incremental lifetime cancer risk above background exposure, and therefore air concentration, the benzene guideline applies to increase above background air concentration as a result of subsurface contamination.

Source: CRC Care Technical report 10, Health Screening levels for petroleum Hydrocarbons in soil and groundwater Part 1 Technical development document (in Appendix H).

Groundwater Screening Levels (µg/L)

Analytes	SSTL for HSL-D (ASC NEPM)	SSTL for Intrusive Maintenance Workers (ASC NEPM)	SSTL for HSL-AB (ASC NEPM)	Drinking Water (NHMRC/ NRMCC, 2011)	95% Freshwater (ANZG, 2018)	Recreational Waters (NHMRC, 2008)
TRH C6-C10 (F1)	NL	NL	NL	-	-	-
TRH >C10-C16 (F2)	NL	NL	NL	-	-	-
TRH >C16-C34	NL	NL	NL	-	-	-
TRH >C34-C40	NL	NL	NL	-	-	-
Benzene	4800	NL	800	1	950	10
Toluene	NL	NL	NL	800	180	8000
Ethylbenzene	NL	NL	NL	300	80	3000
o-Xylene	NL	NL	NL	600	350	6000
m&p-Xylene	NL	NL	NL		275	
Naphthalene	NL	NL	NL	70	16	700

NL: not limiting

Source: ERM RAP 30 November 2021.

Soil Vapour Screening Levels (mg/m³)

Analytes	HSL A&B (sand) (ASC NEPM)	HSL D (sand) (ASC NEPM)	Intrusive Maintenance Worker (CRC Care, 2011)
	0-<1m	0-<1m	0-<2m
TRH C6-C10 (F1)	180	680	180,000
TRH >C10-C16 (F2)	130	500	NL
TRH >C16-C34	-	-	-
TRH >C34-C40	-	-	-
Benzene	1	4	760
Toluene	1,300	4,800	NL
Ethylbenzene	330	1,300	NL
Xylene	220	840	NL
Naphthalene	0.8	3	880

Source: CEXP Deception Bay Service Station (J541) Remediation Action Plan by ERM dated 30 November 2021 (RAP, ERM 2021)