TLCCG
Tullamarine Landfill
Community Consultation Group

MEETING NOTES

WEDNESDAY

18 April, 2018

6:00pm for 6:30 – 9:00 pm

Hume Global Learning Centre
1093 Pascoe Vale Road, Broadmeadows

Facilitator – Jen Lilburn **Note taker** – Andrea Mason

MEETING PURPOSE

To provide an update on site rehabilitation.

ATTENDEES

Community: Ovi Clements, Frank Rivoli, Graeme Hodgson, Peter Barbetti, Mick Colaci, Julie Law, Helen van den Berg, Jos van den Berg, Russell Nilsson, Helen Patsikatheodorou, Kim Westcombe, Sam Cetrola, Lolita Gunning

EPA Victoria: Alistair Nairn (Advisor - Community & Environmental Partners),

Cleanaway: Olga Ghiri (Stakeholder and Community Relations Manager), Stephanie Holland (Post Closure Technical Lead, Engineering), Ken Gann (Acting Regional Manager), Meldina Klehic (Rehab Engineering Project Manager), Kieren McDermott (Environment Specialist),

Apologies: Jeremy Settle (Senior Environment Protection Officer), Harry van Moorst

Facilitator: Jen Lilburn

Note taker: Andrea Mason

ABOUT THESE NOTES

Notes were taken and produced by Andrea Mason. We aim to provide detailed minutes that cover the key information that was provided in the meeting. However, these minutes are not intended to be a transcript of the meeting, and discussions, comments and questions have been summarised to reduce the overall length of this document.

Presenters were given the opportunity to review the notes relating to their item to ensure the discussion was accurately summarised, and that it details best available knowledge at the time of the meeting. Additional comments received after the meeting have been highlighted as such.

These notes will be posted on the Tullamarine Community Information page on the Cleanaway website ***http://www.cleanaway.com.au/community/major-project/tullamarine-closed-landfill-vic/*** *and will be available to the general public. Meeting participants should advise Andrea Mason or Jen Lilburn if they would like their name removed from this public document.*

The intent of these meeting notes is to promote open communication between Cleanaway, local government, community and EPA Victoria. They are not to be used in a manner that compromises this objective.

AGENDA

1	Welcome, Introductions, Jen Lilburn
2	TLCCG Facilitator, Jen Lilburn/Olga Ghiri
3	Post Closure PAN update, Alistair Nairn
4	Operational Update, Stephanie Holland
5	Stormwater connection update inc feedback (Actions 1017-3 &4), Stephanie Holland
6	Landfill gas extraction Update (Action 1017-5), Stephanie Holland
7	Groundwater sampling, Stephanie Holland
8	Update on community-chosen consultant review, Alistair Nairn
9	Roadmap & priorities for discussion in 2018, Jen Lilburn
10	1Schedule of 2018 meetings, Olga Ghiri/Jen Lilburn
11	1Wrap Up and close, Jen Lilburn

ACTIONS FROM THE MEETING

Action 0418_1: *EPA to notify TLCCG when the new Post Closure Pollution Abatement Notice (PCPAN) is finalised.*

Action 0418_2: *EPA to confirm new onsite monitoring requirements.*

Action 0418_3: *Cleanaway to report on settlement rate of the landfill showing any difference between the original state and change over time (at the next meeting).*

Action 0418_4: *Cleanaway to provide the data for bores MB87, MB88, MB89 and MB90 by 18 May.*

Action 0418_5: *Cleanaway to provide a statement to the community outlining the ongoing monitoring of the flare, the instruments to be used and the technical limitations regarding these measurements.*

ITEM 1. WELCOME, JEN LILBURN

Jen Lilburn (Convenor) welcomed everyone and general introductions were conducted. Community members represented residents living close to the landfill, Terminate Tullamarine Toxic Dump Action Group (TTTDAG), Western Region Environment Centre and Friends of Steele Creek.

ITEM 2. TLCCG FACILITATOR, JEN LILBURN/OLGA GHIRI

Jen Lilburn discussed her decision to resign from the position of independent facilitator for TLCCG. She thanked all the members for their participation over the past five years and their commitment to create a TLCCG forum that reflects the values that were agreed by all TLCCG members in 2013.

In 2013, TLCCG guidelines and statements of commitment and purpose were also established and have provided an excellent basis for building respect, cooperation and dialogue. Jen hoped that these will continue to be reviewed by the group. There was agreement that the role of the facilitator has been instrumental in providing a respectful atmosphere where rigorous discussions could be held with everyone listening and seeking to understand. The community thanked Cleanaway for their continued support of this facilitated process.

Olga thanked Jen for her excellent work as the facilitator in guiding TLCCG towards the current open and respectful format which has enabled everyone to have a voice. Cleanaway is committed to continuing community engagement however suggested that this may include different formats in the future. The next TLCCG forum would be used to discuss these options.

This change also impacts on the role of Andrea Mason as independent notetaker. Olga thanked Andrea and indicated that they will be appointing a new independent facilitator who will bring their own notetaker.

Community comments/concerns raised throughout the meeting included:

- The Tullamarine landfill is unique in its issues and its needs for consultation.
- The independence and skills of the facilitator and notetaker are essential to the success of the group.
- The community would like the opportunity to be on the selection panel or meet the new facilitator before the next meeting.
- There is a real risk of undermining the success, progress and goodwill that has been fostered during the past five years and returning to the earlier volatile situation.
- Less frequent meetings pose the risk of meetings needing to be longer to allow sufficient time to discuss the issues.
- Meeting frequency needs to be variable, according to the issues and the timing of reports.
- Other forms of communication such as one to one conversations, emails and social media have a place but may be seen as a form of lecturing and are not the same as meeting in a group where everyone is hearing the same information and listening to each other.
- It is important that the EPA is included in the forums and discussions - particularly with the new changes to the Act and the implications of those.
- Does Cleanaway see community engagement as an important focus or just a requirement they need to satisfy as part of their monitoring?

Olga responded by stating that she will appoint a well-qualified and suitable facilitator for the next meeting based on her knowledge of how this group interacts. She asked the group to trust her to appoint a suitable replacement, keeping in mind she also appointed Jen Lilburn to the role and that worked out perfectly. She explained it would be difficult to involve the community members in choosing a suitable candidate and confirmed there is little need for the community to be involved in that process.

Olga asked the group to consider an end point to these meetings and committed to hosting another meeting later in the year at which time the group will discuss and decide on future meetings based on outstanding issues.

She reassured the group that Cleanaway will not be ceasing community consultation, and commits to maintaining information flow through email updates, and website information. Olga explained this Community Refence Group (CRG) is unique in that, these meetings have run for many years for a site that is inactive, whereas other CRGs are hosted for sites where Cleanaway is operating an active landfill.

Alistair Nairn from EPA Victoria thanked Jen and Andrea for their extremely valuable contributions to improving TLCCG and enabling the transparency that currently exists. He also thanked Cleanaway for supporting these forums and bringing their experts to the table to answer questions and respond to issues.

ITEM 3. POST CLOSURE PAN UPDATE, ALISTAIR NAIRN

Alistair provided an update on the development of the latest Post Closure Pollution Abatement Notice (PCPAN) which is soon to be completed. A couple of years ago EPA created a new template for PCPANs in consultation with industry and the community. Only minor changes were needed to the template, but these include more explicit information as part of the requirements. The new PCPAN for Tullamarine was held in abeyance waiting for input from the community's consultant regarding Tullamarine landfill but now that is not forthcoming the new PCPAN is being written and is almost completed. It also includes new information from reports such as the hydrogeological results. When it is finalised, it will be distributed via TLCCG and will be on the EPA website.

Kieren added that the old PCPAN was workshopped with TLCCG a couple of years ago and changes were made based on feedback from that process.

QUESTION: What are the new onsite monitoring requirements post closure - 2 or 3 years?

Steph: We have regular monitoring to undertake as part of the monitoring plan. This plan must be updated at least every three years and auditor verified. Environmental audits must be undertaken every three years by an EPA approved auditor. – comments in italics are information taken from the Post Closure PAN.

Action 0418_1: *EPA to notify TLCCG when the new Post Closure Pollution Abatement Notice (PCPAN) is finalised.*

Action 0418_2: *EPA to confirm new onsite monitoring requirements.*

COMMENT: ***The new draft EPA Act is coming before parliament and if adopted will bring many changes which may impact on the landfill management. TLCCG will require a facilitator to guide us through this process of change. We will need crystal clear direction, transparency and accountability.***

Stephanie Holland, (Post Closure Technical Lead, Engineering) for Cleanaway provided updates in the next four items on the agenda related to the site and operational matters.

ITEM 4. OPERATIONAL UPDATES, STEPHANIE HOLLAND

- Groundwater, stormwater & leachate sampling occurring this week
- PCPAN received from EPA, no changes
- Routine flare maintenance & calibration was completed on 6th March.
- Received post closure environmental monitoring plan and finalized groundwater and leachate management plan – there are no changes from when Kieren consulted TLCCG on the drafts.

Stephanie added that there are better reporting timelines in the proposed new PCPAN.

ITEM 5. STORMWATER CONNECTION, STEPHANIE HOLLAND

- Design completed by Golder is currently being assessed internally.
- There will be a final decision made by the next meeting.
- The current system is maintaining adequate control of stormwater on the site in the interim.

Stephanie added that Cleanaway is basing its plans for the stormwater on the latest version presented at the October 2017 TLCCG meeting but is still finalising the design with its consultants. The filtration system is still part of the future plan and other improvements may be included. The consultants have used all guidelines available

to them in developing the design. TLCCG and Friends of Moonee Ponds Creek will be notified of any changes to the final design.

ITEM 6. LANDFILL GAS EXTRACTION, STEPHANIE HOLLAND

Cleanaway will not be penetrating the landfill cap for gas extraction. It will only ever make improvements where and when identified to the existing extraction system. This is undertaken through regular routine maintenance and inspections.

A header realignment project for the existing system was undertaken in January to address natural landfill settlement including:

-- Exposure of the top of the pipe across the flat area, identifying irregularity or fall on pipework

-- Relaying pipework where required and backfilling subsoil & topsoil layers

No penetrations were made to the cap, the system sits above the cap liner (synthetics) within the soil matrix.

The header line runs to the flare and this was exposed and realigned with the correct fall to allow gas extraction.

Cleanaway advised that the project was a success and that it will continue to monitor its effect on improving landfill gas extraction.

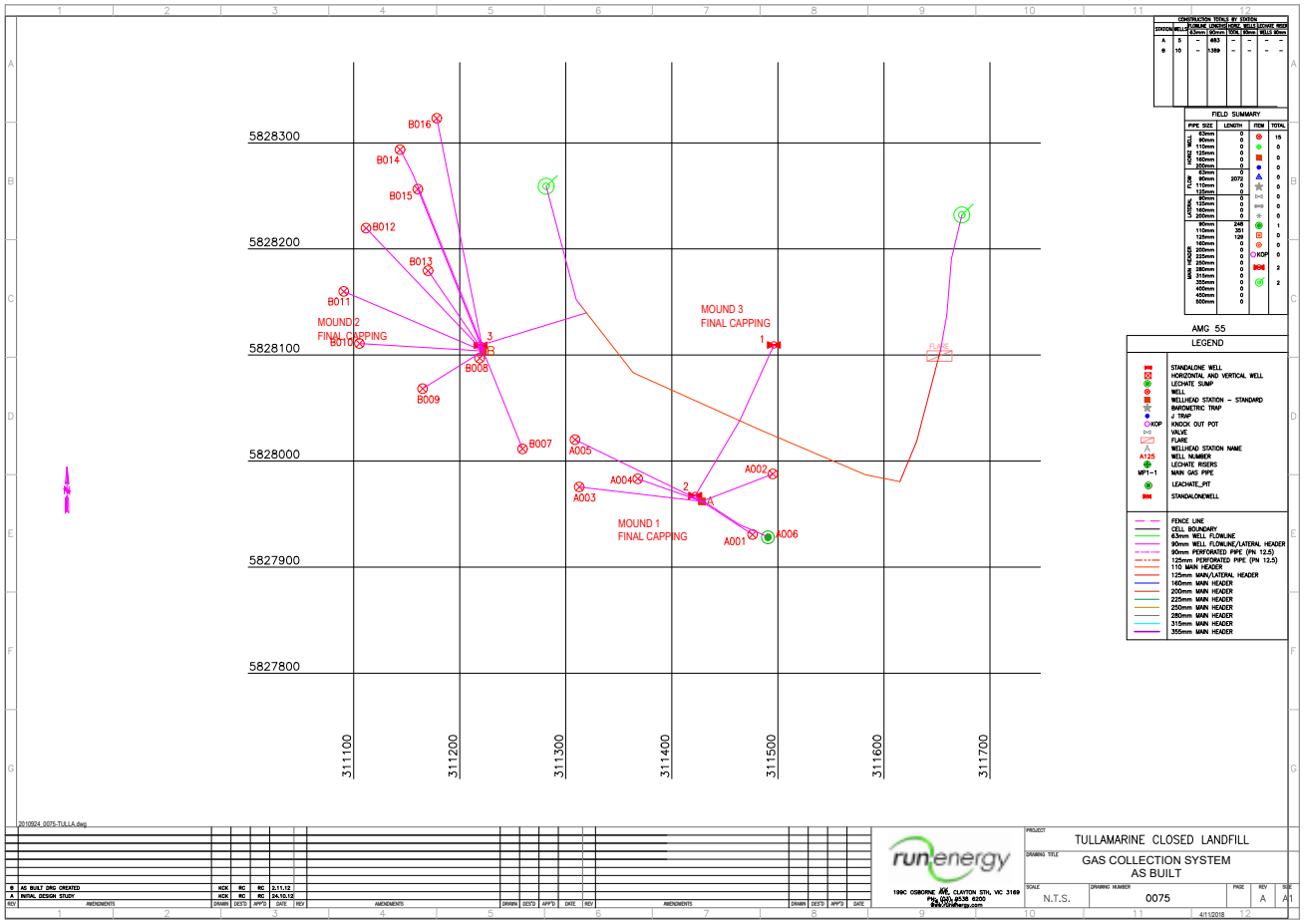

FIGURE 1 GAS COLLECTION SYSTEM AND POSITION OF THE HEADERLINE PIPE.

In answer to questions, Stephanie and Ken further explained:

Settlement on the landfill is a natural process and occurs across the landfill. It is not a reflection of the integrity of the cap which is not expected to move and was built to high standards with flexible synthetic materials. Regular surface monitoring is designed to pick up any issues with the integrity of the cap. The pipe was not cut to undertake this realignment. The pipe sits at 300mm below the soil surface, but above the cap. Sand was used to establish the improved alignment of the pipe.

The realignment should improve the extraction rates by reducing the sag in the pipes and the issues caused by water condensation. Cleanaway currently has no intention of decommissioning the 3 holding ponds on the landfill.

Cap integrity

Concerns were raised regarding the level of the settlement of the cap. It had been predicted that there would be settlement of 10cm over time. The community called for a report on the status of the cap settlement and any potential threats to its integrity such as erosion, vibration from neighbouring roadworks and the airport.

After the meeting: *The document - Independent Expert Group Review of the Tullamarine Landfill Management And Cap Design, Thiel Engineering, March 2011 was provided and can be seen in Attachment 2.*

After the meeting: Stephanie Holland noted that for the cap there has been ~5mm of settlement since it was capped. This is from June 2013 – December 2017. This is impossible to segregate into areas. This is for the site overall. The next survey is due in June 2018 so will discuss if there is anything further from the June Survey when we next meet with the community in October.

Alistair indicated that monitoring of the performance of the cap was included in the PCPAN.

Action 0418_3: Cleanaway to report on settlement rate of the landfill showing any difference between the original state and change over time (at the next meeting).

ITEM 7. GROUNDWATER SAMPLING, STEPHANIE HOLLAND

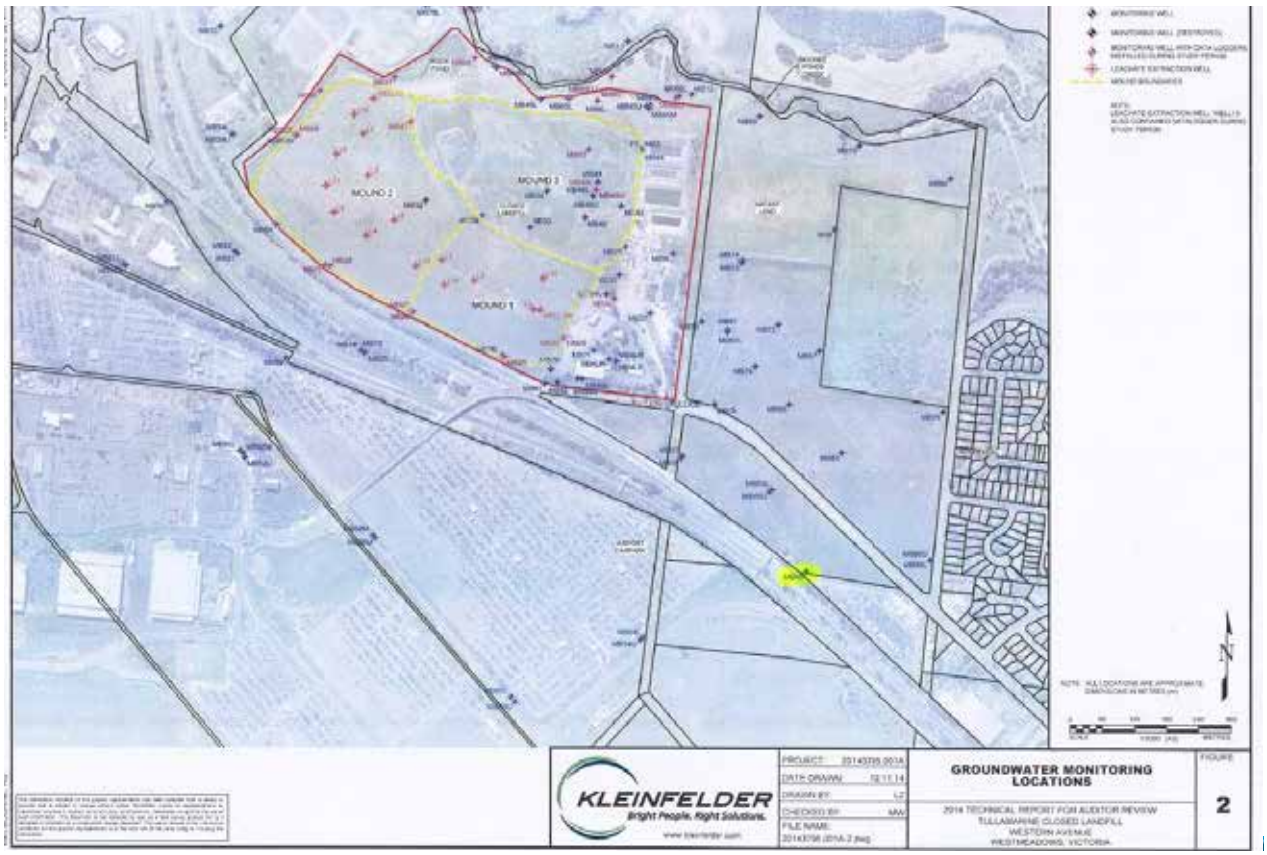

FIGURE 2 GROUNDWATER MONITORING LOCATIONS

Stephanie showed the results from the groundwater testing at bore MB56 (see Tables 1 - 16 below) and indicated that there were two exceedances but that neither of these were of concern. The total dissolved solids (salts and carbonate) were over the drinking water guidelines but are all substances naturally found in groundwater. The Selenium level was 0.01mg/L over the Australian and New Zealand Environment Conservation Council (ANZECC) drinking water quality guidelines but is also found naturally from rocks and minerals and is an essential nutrient to humans.

QUESTION: Why has the data from just this one bore been supplied and not the other bores in and close to the residential area?

Kieren: The data was supplied in response to a request from the community following the open day held in 2016. These bores have dual extraction probes for gas and water and have been established in response to community concerns and the consultants will have the data for bores MB87, MB88, MB89 and MB90 located close to or within the residential zone.

COMMENT: It has been discussed previously that data needs to be presented in a manner that is consistent and is compared to the standards so that exceedences can be easily deduced. It would be appreciated if everyone could use a similar template for reporting data.

Action 0418_4: Cleanaway to provide the data for bores MB87, MB88, MB89 and MB90 by 18 May.

Outstanding Actions

Action 1017_3 *Cleanaway to report to TLCCG on feedback received regarding the stormwater connection design and*

Action 1017_4 *Cleanaway to consult Melbourne Water to see if they are 'wedded' to the concrete pipe outlet to the creek – Update provided at this meeting, completion pending update of final design.*

Action 1017_5 *At the next TLCCG meeting, Cleanaway to explain the proposal to increase the extraction of landfill gases, and whether this will involve additional gas well/s and/or cap penetration – completed in discussions in this meeting.*

Action 1017_6 *Cleanaway to distribute raw data from the groundwater bore testing to TLCCG members – Complete for MB56. Other bores to be picked up in Action 0418_4.*

Groundwater testing at bore MB56

Analyte		Anions and Cations																	
		Ferric Iron	Ferrous Iron	Sodium	Calcium	Magnesium	Potassium	Cyanide (total)	Sulphate	Sulfate as S	Chloride	Fluoride	Nitrite as N	Nitrate	Nitrate as N	Nitrite + Nitrate as N	Nitrite + Nitrate as N	Total Ammonia as Nitrogen	Total Kjeldahl Nitrogen
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date																		
MB56	09-Jul-15	< 0.05	< 0.05	**2,200**	**81**	**200**	**14**	-	-	**500**	**3,100**	< 0.5	< 0.02	-	**2.6**	-	**2.6**	< 0.01	**0.6**
	13-May-16	< 0.05	< 0.05	**2,100**	**91**	**240**	**21**	-	-	**470**	**3,100**	< 0.5	< 0.02	-	**2.0**	-	**2.0**	< 0.01	-
	05-Jun-17	< 0.05	< 0.5	**2,500**	**110**	**270**	**21**	< 0.005	**1,500**	-	**3,200**	-	< 0.02	**1.8**	-	**1.9**	-	< 0.01	-

TABLE 1

Anions and Cations				Alkalinity						Inorganics
		Total Kjeldahl Nitrogen as N	Nitrogen	Bicarbonate	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Total Alkalinity as CaCO3	Electrical Conductivity @ 25°C	Total Dissolved Solids
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L
Sample Name	Sample Date									
MB56	09-Jul-15	-	**3.2**	**410**	-	< 10	< 10	-	**12,000**	**7,200**
	13-May-16	< 0.2	**2.0**	-	**490**	< 10	< 10	-	**11,000**	**7,000**
	05-Jun-17	**0.4**	**2.3**	-	**460**	< 10	< 10	**460**	**14,000**	**7,800**

TABLE 2

Analyte		Metals																		
		Aluminum	Arsenic	Barium	Boron	Cadmium	Chromium	Chromium III	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date																			
MB56	09-Jul-15	< 0.05	< 0.001	< 0.02	< 0.05	< 0.0002	**0.005**	-	-	< 0.001	**0.006**	< 0.05	< 0.001	**0.008**	< 0.0001	**0.019**	**0.018**	**0.028**	-	**0.011**
	13-May-16	< 0.05	**0.001**	< 0.02	**0.3**	< 0.0002	**0.001**	-	-	< 0.001	**0.002**	< 0.05	< 0.001	**0.019**	**0.0003**	**0.019**	**0.007**	**0.039**	-	**0.004**
	05-Jun-17	-	**0.001**	-	-	< 0.0002	**0.002**	-	-	-	**0.002**	< 0.05	< 0.001	**0.077**	< 0.0001	-	**0.006**	-	-	**0.024**

TABLE 3

Analyte		Inorganics	Anions and Cations			Natural Attenuation Parameters	Anions and Cations	Natural Attenuation Parameters	Alkalinity			Inorganics	Anions and Cations				Natural Attenuation Parameters	Metals
		Total dissolved solids	Ferrous Iron	Ferric Iron	Chloride	Sulfate as SO4	Sulfate as S	Methane	Total Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Total Organic Carbon	Nitrite + Nitrate as N	Nitrite + Nitrate as N	Nitrate as N	Nitrite as N	Dissolved Iron	Manganese
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date																	
MB56	09-Jul-15	**7,200**	< 0.05	< 0.05	**3,100**	-	**500**	< 0.05	-	**410**	-	-	-	**2.6**	**2.6**	< 0.02	< 0.05	**0.008**
	13-May-16	**7,000**	< 0.05	< 0.05	**3,100**	-	**470**	< 0.05	-	-	**490**	-	-	**2.0**	**2.0**	< 0.02	< 0.05	**0.019**
	05-Jun-17	**7,800**	< 0.5	< 0.05	**3,200**	**1,500**	-	< 0.05	**460**	-	**460**	-	**1.9**	-	-	< 0.02	< 0.05	**0.077**

TABLE 4

Analyte		Polycyclic Aromatic Hydrocarbons																	
		Naphth-alene	2-Methyl-naphthalene	Acena-phthylene	Acena-phthene	Fluorene	Phena-nthrene	Anthr-acene	Fluor-anthene	Pyrene	Chrysene	Benz-o[a]anth-racene	Benzo-[k]fluora nthene	Benzo[b] & Benzo[j]fl uoranthen	Benzo-[a]-pyrene	Indeno[1,2,3-c,d]pyrene	Dibenz[a,h]-anthracene	Benzo[g,h,i]perylene	Total PAH
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date																		
MB56	05-Jun-17	< 0.01	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

TABLE 5

Analyte		Natural Attenuation Parameters	Light Hydrocarbons			Anions and Cations	
		Methane	Ethane	Ethene	Ethene	Nitrogen	Nitrogen
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date						
MB56	09-Jul-15	< 0.05	-	-	< 0.1	**3.2**	-
	13-May-16	< 0.05	-	-	< 0.1	**2.0**	-
	05-Jun-17	< 0.05	< 0.1	-	< 0.1	**2.3**	-

TABLE 6

Analyte		Organochlorine Pesticides				
		Hexachlorobenzene	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloroph ene	Hexachloropropene
Units		mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date					
MB56	09-Jul-15	< 0.0001	< 0.0001	< 0.0001	-	-
	13-May-16	< 0.0001	< 0.0001	< 0.0001	-	-

TABLE 7

Analyte		Phenolic Compounds (Non-Chlorinated)											
		Phenol	2-Methylphenol (o-Cresol)	3- & 4-Methylphenol (m&p cresol)	Cresols	2-Nitrophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	4-Nitrophenol	Dinoseb	2-Cyclohexyl-4,6-dinitrophenol	4,6-Dinitro-2-methylphenol	Non-Halogenated Phenols (Sum of total)
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date												
MB56	05-Jun-17	< 0.003	< 0.003	< 0.006	-	< 0.01	< 0.003	< 0.03	< 0.03	< 0.1	< 0.1	< 0.03	< 0.1

TABLE 8

Analyte		Phenolic Compounds (Chlorinated)											
		2-Chlorophenol	4-Chloro-3-methylphenol	4-Chlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2,3-Dichlorophenol	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	2,3,4,6-Tetrachlorophenol	Tetrachlorophenols (Sum of total)	Pentachlorophenol	Halogenated Phenols (Sum of total)
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date												
MB56	05-Jun-17	< 0.003	< 0.01	-	< 0.003	< 0.003	-	< 0.01	< 0.01	-	< 0.03	< 0.01	< 0.01

TABLE 9

		1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2-Dichloroethane	1,2,3-Trichloropropane	1,3-Dichloropropane	Anionic Surfactants as MBAS
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date											
MB56	09-Jul-15	< 0.001	< 0.001	< 0.001	**0.003**	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	-
	13-May-16	< 0.001	< 0.001	< 0.001	**0.001**	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	-
	05-Jun-17	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	-

TABLE 10

Analyte		1,3-Dichloropropene, total	Bromomethane	Bromochloromethane	Carbon tetrachloride	Chloroethane	Chloromethane	cis-1,2-Dichloroethene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	1,3,5-Trichlorobenzene
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date											
MB56	09-Jul-15	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
	13-May-16	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001
	05-Jun-17	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-

TABLE 11

Analyte		1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Chlorotoluene	4-Chlorotoluene	Benzyl chloride	Bromobenzene	Chlorobenzene	Pentachlorobenzene	1,2,3,4-Tetrachlorobenzene	Benzal chloride
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date											
MB56	09-Jul-15	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001
	13-May-16	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001
	05-Jun-17	< 0.001	< 0.001	< 0.001	-	< 0.001	-	< 0.001	< 0.001	-	-	-

TABLE 12

Analyte		Benzotrichloride	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Isopropylbenzene	Propylbenzene	Styrene	Bromodichloromethane	Bromoform	Chloroform	Dibromochloromethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acrylonitrile
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date													
MB56	09-Jul-15	< 0.0001	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	-
	13-May-16	< 0.0001	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	-
	05-Jun-17	-	< 0.001	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	-

TABLE 13

Analyte		Formaldehyde	Acetone	Allyl chloride	1,2-Dibromoethane	1,2-Dichloropropane	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Carbon disulfide	Decane	Undecane	Tridecane	Dodecane	Methane	Ethane
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date														
MB56	09-Jul-15	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-	-	-	-	< 0.05	-
	13-May-16	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-	-	-	-	< 0.05	-
	05-Jun-17	< 0.2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-	-	-	-	< 0.05	< 0.1

TABLE 14

Analyte		Ethene	Ethylene
Units		mg/L	mg/L
Sample Name	Sample Date		
MB56	09-Jul-15	< 0.1	-
	13-May-16	< 0.1	-
	05-Jun-17	< 0.1	-

TABLE 15

Analyte		BTEXN							Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons					
		Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Naphthalene	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	C_{10} - C_{36} sum	C_6 - C_{10}	C_6 - C_{10} minus BTEX (F1)	$>C_{10}$ - C_{16}	$>C_{10}$ - C_{16} minus Naphthalene (F2)	$>C_{16}$ - C_{34}	$>C_{34}$ - C_{40}
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Name	Sample Date																		
MB56	09-Jul-15	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.003	< 0.02	< 0.02	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.05	< 0.05	< 0.1	< 0.1
	13-May-16	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.003	< 0.01	< 0.02	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.05	< 0.05	< 0.1	< 0.1
	05-Jun-17	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.003	< 0.01	< 0.02	< 0.05	< 0.1	< 0.1	< 0.1	< 0.02	< 0.02	< 0.05	< 0.05	< 0.1	< 0.1

TABLE 16

ITEM 8. UPDATE ON COMMUNITY-CHOSEN CONSULTANT REVIEW, ALISTAIR NAIRN

Alistair reported that EPA Victoria and the community have cancelled their contract with the US consultant as he had been unable to provide any feedback on the site before finding himself unable to finalise the project citing personal reasons. He did however, refund all fees charged to date.

The community reported that they are actively pursuing a new consultant and hope to have some news before the next meeting, however it was noted that it is very difficult to find a consultant who is not compromised and can provide independent advice on the management of the Light Non-Aqueous Phase Liquid (LNAPL).

ITEM 9. ROADMAP AND ONGOING ISSUES, JEN LILBURN

Jen used the Site Rehabilitation Roadmap from October 2017 as a basis for identifying ongoing issues that TLCCG needs to address in the future. A new Roadmap will be developed once the key issues are established.

Key points in the roadmap for future discussion are:

- Groundwater Management Plan & Groundwater Monitoring Schedule
- Landfill Gas Management Plan/Auditor review
- Ongoing site remediation
  - Design of stormwater connection
  - Construction of stormwater system
  - Remove diversion of surface runoff to sewer (once wetland is functioning)

Flare and Ambient Air monitoring

The community raised concerns regarding the deficiencies in the sampling of flare emissions and the modelling which suggested that there are no impacts from the flare. Cleanaway gave an undertaking in the past to voluntarily undertake ambient air monitoring to confirm these claims. Claims that the flare would achieve 99.9999% destruction rates which would have been supported by the community have not been proven as the instruments used in the sampling cannot test to greater than 99.95% efficiency. It was also noted that the reports discussed the destruction and levels of methane and carbon dioxide but not all the other chemicals that may be in the flare. The potential risks from flare emissions is a major ongoing concern for the community. Cleanaway reiterated the best practice available technology cannot read any higher than 99.95%.

The community asked for a retraction of the 99.99% destruction claim from Cleanaway so that there was clarity around this issue.

Cleanaway responded that they are using the best technical equipment currently available and the test results are within the limits of possible testing which show the flare is achieving 99.95% destruction rates. Flare monitoring is not a requirement of the PCPAN nor is the ambient air monitoring. The flare function monitoring is continuous within the flare.

Action 0418_5: Cleanaway to provide a statement to the community outlining the ongoing monitoring of the flare, the instruments to be used and the technical limitations regarding these measurements.

In summary, ongoing issues for the landfill include:

- New PCPAN and changes to legislation
  - Landfill Gas Management Plan/Auditor review
- Flare monitoring and Risks from the flare outputs
  - Chemical destruction and possible toxin emissions
- Groundwater pollution levels
  - Bore monitoring
  - Groundwater plume and its proximity to homes
- Cap integrity
- Stormwater redesign
- LNAPL extraction
- Risks to the community
  - Independent review of the LNAPL extraction options (new consultant)
- Bufferland maintenance and future
- Community engagement/facilitation/channels and commitment.

ITEM 10. SCHEDULE OF 2018 MEETINGS, OLGA GHIRI

Olga suggested 24 October 2018 for the next TLCCG forum which will allow enough time to provide the next reports, engage a new facilitator and discuss how best to cover the issues highlighted. This will be confirmed with the group.

ITEM 11. WRAP UP AND CLOSE, JEN LILBURN

Jen thanked everyone for attending and wished them all the best for the future.

The community thanked Jen for her hard work, care and for establishing a forum where there is respect and genuine conversations. They also thanked Andrea for her part in communicating the forum's outcomes.

Meeting closed 9.00pm

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