

Agenda



Prepared for: Community Consultation Group Meeting
Location: Galaxy Exploration Office - Ravensthorpe
Date: 9th September 2019
Time: 08:07 AWST

Attendees		Apologies	
Ken Norman (KN)		Sue Leighton (SL)	
Ian Dickinson (ID)		Fiona Philson (FP)	
Geoff Fairhead (GF)		Gavin Pollock (GP)	
Graham Steel (GS) (Alternate for GP)			
Kim Bennett (KB)			
Pamela Makar (PM)			
Paul Jefferies (PJ)			
Keith Muller (KM)			
Matt Gmelig (MG)- Galaxy guest to discuss community concerns regarding dust and its effects.			
Agenda Items		Responsible	
1. Welcome		Ken Norman (KN)	
2. Apologies			
3. Declaration of Conflict of Interest			
4. Confirmation of the Previous Meeting Minutes			
5. Actions Items and Outcomes			
6. Administrative Items			
7. Community Engagement Activities			
8. Other Business			
9. Next Meeting			
10. Close			

1. WELCOME

- Ken Norman (KN) opened the meeting. KM introduced MG who conducts independent hygiene testing for Galaxy personal. MG is a qualified nurse who transitioned over to a ventilation officer and Occupational Hygienist working for SGC safety.

2. APOLOGIES

- Sue Leighton (SL)
- Fiona Philson (FP)
- Gavin Pollock (GP)

3. DECLARATION OF CONFLICT OF INTEREST

- No conflicts of interest were identified by CCG members.

4. CONFIRMATION OF THE PREVIOUS MEETING MINUTES

- June 2019 CCG 2019 meeting – All members confirmed previous meeting minutes.

5. ACTIONS ITEMS AND OUTCOMES

- Previous meeting actions that have been closed will remain on the below list for succeeding meeting before being removed.
- Actions below summarize commitments made during the meeting.

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Date Raised	No.	Action required	Who	Date due	Action Outcomes
13/06/2019	35	Contact Katie Morgan regarding Wildflower 2019 event as the Contribution figure from galaxy towards the event is not displayed in March's CCG minutes.	Galaxy	Closed 12/09/2019	Galaxy's contribution was for the cost of travel and accommodation for Sue McDougall, 6PR radio host and a media crew. Galaxy also provided rock samples for the flower show.
13/06/2019	36	Galaxy need to come up with an action regarding highlighting when road closure will occur during Blast Events for harvest periods (October Onwards).	Galaxy	Closed 12/09/2019	Galaxy are aiming to have blasting occur at 13:30, only in times of absolute necessity will blasting occur at the end of the working day 17:00, or on Sundays. Roads will be closed by Galaxy personal as usual, the ½ hour prior blasting but the sentries will allow controlled movements through the area if the blast is not about to be detonated. Each access will require approval from the blast controller. The waiting time will be reduced to approximately 5 minutes.
13/06/2019	37	Hawks Nest Historical Society Plan update- Information passed on to Galaxy for Historical Society	ID	Closed 12/09/2019	Ann passed on required information to Galaxy. A meeting was also held at Hawks nest to discuss concerns.
13/06/2019	38	Galaxy to provide an updated plan to show all mining updates, pit waste dump and creek diversion.	Galaxy	Closed 12/09/2019	Plan was distributed to CCG members
13/06/2019	39	Galaxy to provide core samples from previously drilled diamond drill holes for the plant root zone (1-10m), in the surrounding area of Mt Cattlin. This will be used in the flower show exhibition. Core samples will need to be dropped off by the 6th/7th of September with a mineralogy write up on the provided sample. Provide a collection of labelled rocks, preferable samples which they can keep for future shows. Sue Leighton can be contacted for sample drop off and collection.	Galaxy	Closed 12/09/2019	Samples were provided to the flower show for exhibition
13/06/2019	40	Galaxy provide details covering community concerns on dust.	Galaxy	Closed 12/09/2019	Discussed at Community night, dust results sent through to CCG. Site notice 110 handed out to CCG members and sent to the individuals raising concerns with recent high wind event day. Matt Gmelig is an Occupational Hygienist and former Remote Area Nurse independent to Galaxy. He has been brought to Ravensthorpe to discussed types of dust and the

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					<p>effect of respirable and irrespirable dust with CCG members and Galaxy personnel: Galaxy completes three types of testing;</p> <ul style="list-style-type: none"> • Respirable Dust- Hi Vol sampler, for 24hrs on a 1 in 6-day sampling regime for PM 10 particles. • Deposited Dust- Dust deposition gauges capture all non- directional environmental dust deposited in the area over the month. • Personal Hygiene Monitoring- Conducted for Galaxy personnel, this determines the content of the air they breathe over a course of the day. This will be an adjusted 8hr Time Weighted Average and tests for respirable dust, respirable silica, inhalable dust and mica. A static monitor is also placed at the Hi-Vol sampler to test air content over the town. <p>The following words are paraphrased from the discussion held by MG with the CCG members. (MG) The dust event that happened the other week (27th October)- consisted of dust that was very visual; there are two types of dust;</p> <ul style="list-style-type: none"> • Inhalable dust - the stuff that gets caught in the nose and throat, to be later expelled; and • Respirable dust - the fine dust that goes deep in the lungs unable to be expelled. <p>The mica is about the size of the stuff they put in makeup to make it shimmer, it is visual dust and unlikely to be harmful as this is the stuff that gets coughed up. A very high amount of visual dust is required to be harmful to health, though it may or may not trigger an asthma attack. I have carried out the personal monitoring for about a year. This testing is a legislative requirement, and Companies have to monitor to ensure that personnel are safe and are not being over exposed. To put the dust into perspective I monitor personnel</p>

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					<p>working at the mine site on a regular basis and there has only been one exceedance from the multiple samples taken. This occurred in the lab and is due to the fact they are crushing and pulverizing the rocks. The personnel working in this area are required to wear respiratory protection as this is can be a dusty environment. Galaxy is buying their own personal monitors to allow monitoring, to capture the amount of dust people are exposed to on high wind event days when I am not around to monitor it.</p> <p>It is the silica content of the mica which is of concern, visible mica is unlikely to create a health issue as your unlikely to breathe it deep into your lungs. There is an exposure standard put out by the government that must not be exceeded which is based over a standard 8-hour workday, as mining works longer days this is adjusted.</p> <p>The original exposure standard is set on health effects. When everyone meets the set standards, the regulator has historically dropped the exposure standard, to keep it as low as practicable as the goal is zero exposure. I do a lot of work around asbestos, which there is a lot of fear around. The people at Wittenoom where exposed to levels much higher than the current exposure standard.</p> <p>There is naturally occurring asbestos in the air. When reading slides a count of <10 fibres in 400L of air is considered background. It needs to be a respirable airborne fibre to be a risk to health.</p> <p>When you blast, there is a potential, as it becomes airborne, but it disperses immediately.</p> <p>One reason I come back every three months is to identify outlier results within the sampling program. When an outlier is identified I will be required to ask what occurred to place the person above the exposure standard on that one day, with no effect on health. For respirable diseases like asbestosis or silicosis it is long term exposure to high results, one-off events are unlikely to cause risk to health.</p>

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					<p>We identify why a person was exposed to levels above the set exposure standards and then place in controls, it does not mean that a person is going to get sick from that one-time exposure, it means we can make improvements. During a monitoring period the person who is being monitored could have one event over a very short period which exposure to silica occurred above the set exposure standard, but over the 8hr sampling period the average sits below this exposure standard. The monitoring that Galaxy do, in town, is below the World Health Organisation (WHO) guidelines.</p> <p>For inhalable Dust the exposure standard is 10 mg/m³ and the Galaxy trigger level is 5 mg/m³, the respirable exposure standard is 3 mg/m³ and the trigger level is 1 mg/m³. If these high wind event where happening every day it would be an issue but as one offs, I would be extremely surprised if the trigger limit for respirable dust was exceeded. With the way the wind blows, the fine stuff is blown away and the stuff you see in the air are the large particles that do not get trapped in your lungs. Personnel working in potentially dusty locations will wear dust masks, the personal monitor does not account for the mask being worn, it just captures what is in the air. The personal monitor samples the dust that a person is exposed to.</p> <p>(KN) When I was first on Council there was a concern about Beryllium - it is a very nasty mineral, but I am very glad to see that Galaxy assay results are well below the exposure level. If the personnel onsite are coming back below the exposure standards with the personal monitors, and they are working in the dust, then that is something that needs to extend to the community.</p> <p>(KN/KB) Looking at the results provided it looks like the air is safe. It is just a matter of getting that message out to the community. The challenge for Galaxy is to reassure to community about these one-off events. From a layman's viewpoint of running my eyes over the graphs from the last</p>

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					<p>meeting it's all safe.</p> <p>(PM) MG is very considerate and during his site visits he will set up a personal monitor at the Hi-Vol monitor located on Kingsmill Street. This monitor is where I get my mica and silica results from. DDG09 is at the Rec Center, DDG08 is on the fire break near the ACH camp. All the other DDG's are scattered around the mine site boundary.</p> <p>(KB) I've been stopped by many people with concerns on the dust. The DDG's capture the dust within the area, but it is a matter of knowing the location the monitors are located and vicinity they collect samples for so that people who do have concerns about the volumes of dust being deposited on their place can be reassured.</p> <p>(JF) The amount of dust deposited on my property is thick, every time you need to use something it has to have dust removed. I really can't believe it's not dangerous in the sense of the amount of dust being deposited.</p> <p>(KM) Matt spoke about the Health effects, so that is our primary concern, but also of concern is the volume of dust that leaves site, just because we don't consider it unhealthy does not mean we are ok with it. One of our biggest sources of dust is the TSF, material deposited here is predominantly less than 500 µm and sometimes goes up to 1.5 mm. We were not able to cap the TSF until we got approval to place the material into the in-pit TSF. The building of the infrastructure was being built prior to DWER approval was gained, this allowed the in-pit TSF to be opened on the approval day.</p> <p>Material is no longer being placed on the TSF which means we can commence capping it. There are a few options to cap it, chemical treatment- Gluon to spray the area, which forms a sheet to seal the surface, but if a break in this seal occurs the area can become susceptible to creating airborne material again, retreatment is essential for its effectiveness. The other option is to cap it with our 14mm</p>

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					rejects material. It has taken approximately 6 weeks of draining the water within the TSF to allow the material to consolidate enough to allow machinery safe access to commence capping.
12/09/2019	41	Provide transitional material for RHS to fix up damage done to Hawkes nest site and block tracks.	Galaxy		Open
12/09/2019	42	Provide map with DDG and Hi Vol location to CCG members	Galaxy	Closed 30/09/2019	Attached with Minutes
12/09/2019	43	Organise a meeting with key stakeholders (RAIN, SoR) regarding a discussion on Post Mining Land Use and rehabilitation of the waste dump and in pit TSF.	Galaxy		Open
12/09/2019	44	Provide a post to go on the SoR Face Book page that connects to the CCG minutes already located on the Shire website.	Galaxy/SoR	Closed 13/11/19	Closed 13/11/2019
12/09/2019	45	Provide water data results to Jen Chambers regarding section of Cattlin creek where water is seeping.	Galaxy	Closed 14/11/19	Provided 14/11/2019

6. ADMINISTRATIVE ITEMS

- CCG members can invest in GXY shares with no conflict of interest.

6.1 Galaxy Progress Report Dust monitoring results:

Dust monitoring:

New results for dust monitoring have been received for both the Dust Deposition Gauges (DDG's) and Hi Vol sampler.

DDG's- (measures deposited dust):

The dust deposition gauges allow Galaxy to assess potential dust nuisance and amenity impacts upon the local community. As there are no relevant regulatory criteria in Western Australia for acceptable dust deposition levels, the dust deposition criteria adopted by the NSW EPA (2017) have been applied as our trigger threshold. All results, bar June 2019, for Community Dust Deposition Gauges have been below the standard of 4 grams/m²/month (ash Content). The control DDG (DDG20) has been included as a reference site, however this DDG is located in a farmer's paddock 20km NE of the Mt Cattlin Mine site. DDG8 was reinstated on the 30 April 2019, data collection has recommenced. DDG8 and DDG9 have been labeled to inform the public what they are and hopefully prevent future damage.

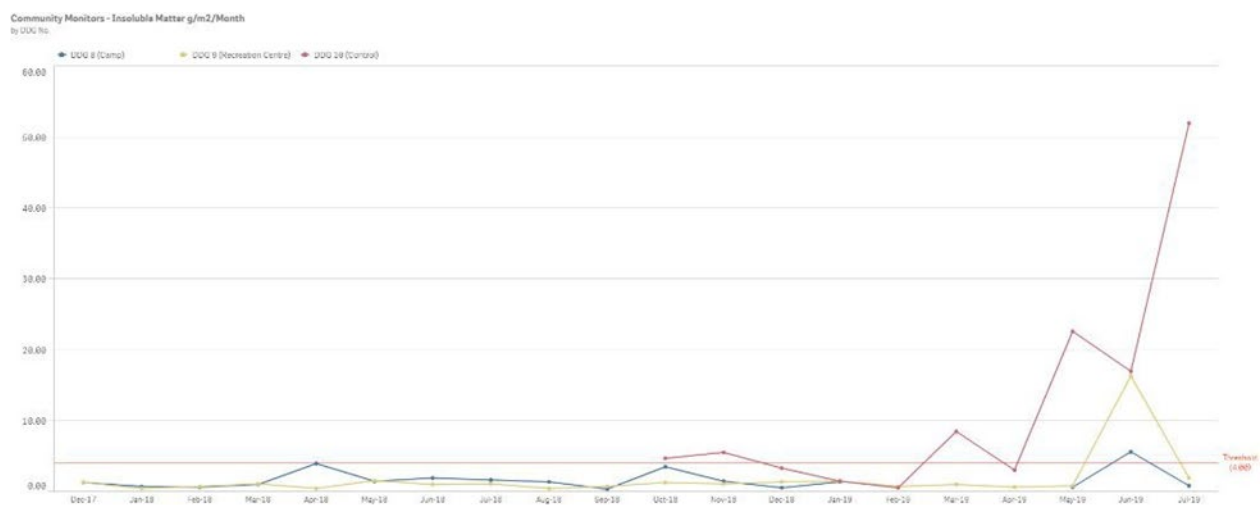


Figure 1: Insoluble matter is everything in the gauge (<1mm) that is retained on the filter as per AS3580.10.1 which is the Australian Standard the sampling and analysis is conducted to.

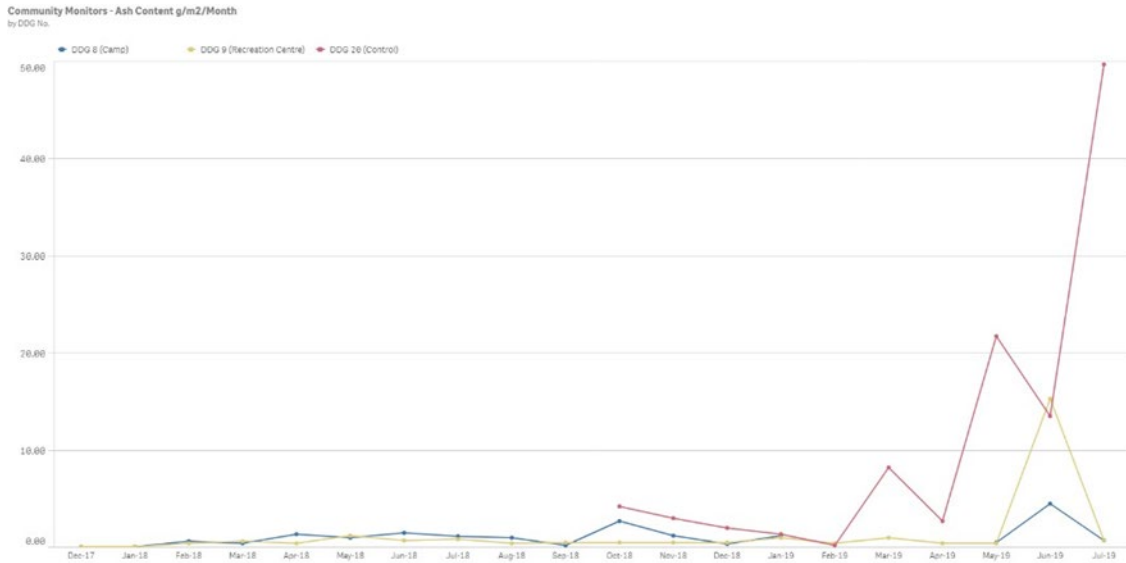


Figure 2: After the Insoluble result are obtained the filter is then ashed at 850 degrees and this produces the ash result. The ash result is essentially only the heavy mineral matter with any organic matter or volatiles reported as combustible.

Other Than June 2019 all Community Dust Deposition Gauge monitors have all returned results below the standard of 4 gm²/month.

The dates recorded on the horizontal axis indicate the month the sample was collected, results are calculated over the recorded sampling periods to give results in gm²/month. The control DDG (DDG20) has been included as a reference, however this DDG is located in a farmer's paddock 20km NE of the Mt Cattlin Mine site. DDG20 exceeded the trigger threshold during November and December 2018 and again in March, May, June and July 2019.

MICA SILICA (PERSONAL HYGIENE MONITOR)

Testing carried out for silica and mica is determined using a personal hygiene monitor placed near the HiVol sampler. This will assess the potential for adverse effects on human health in the local community from exposure to fine particulate matter. Sampling results are based on safe work Australia's Time Weighted Average (TWA) calculated over an adjusted 8hr workday. All town results to date for silica and mica samples have come back below the standard of 0.1 mg/m³ for quartz (silica) and 2.5 mg/m³ for mica.

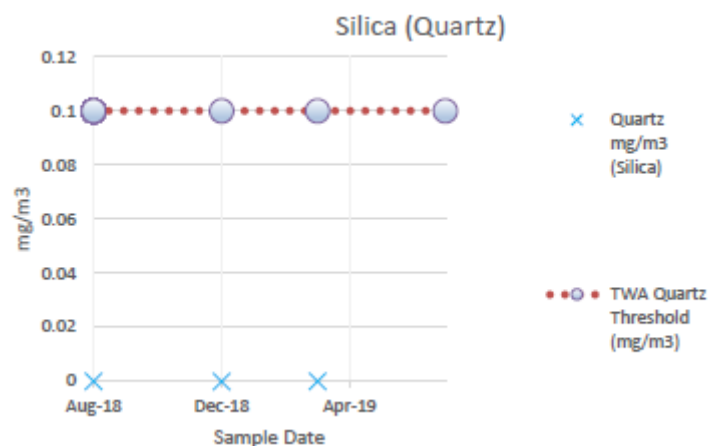


Figure 3: Silica results are collected at Kingsmill street near the Hi Vol sampler using a personal hygiene monitor. All results to date are below both the labs Limit of reporting and threshold levels based on Workplace Exposure Standards for airborne contaminants using TWA (Time Weighted Average calculated over an 8hr day).

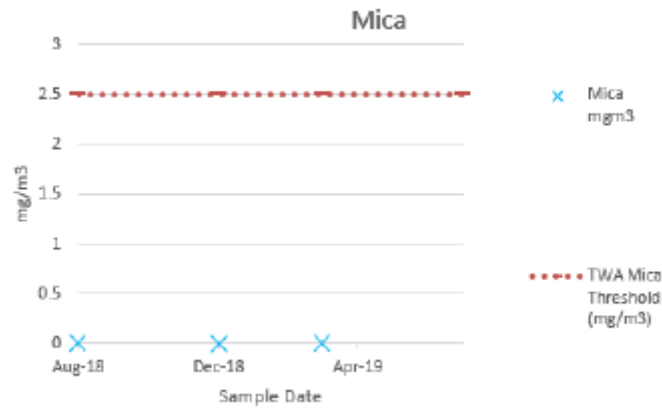


Figure 4: Mica results are collected at Kingsmill street near the Hi Vol sampler using a personal hygiene monitor. All results to date are below both the labs Limit of reporting and threshold levels based on Workplace Exposure Standards for airborne contaminants using TWA (Time Weighted Average calculated over an 8hr day).

Hi Vol Sampler- (measures respirable dust)

The below graphs show assay results for the Hi Vol sampler for PM10 and selected metals. The Hi-Vol is set up at a residential house on Kingsmill St within the townsite of Ravensthorpe.

- PM10:

The Hi Vol sampling for PM10 allows Galaxy to assess the potential for adverse effects on human health in the local community from exposure to fine particulate matter. Galaxy uses nationally recognized ambient air quality standards for various common air pollutants, including PM10 as a trigger level. PM10 has remained below the threshold for the 24hr standard, see Error! Reference source not found..

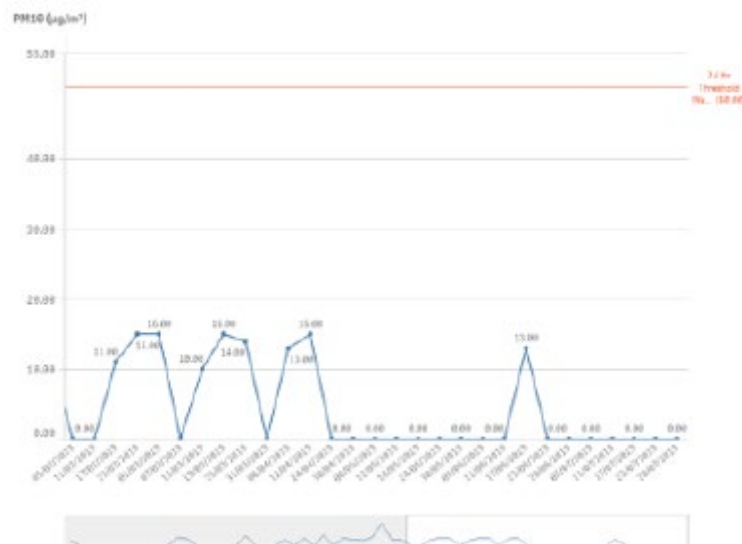


Figure 5: Hi Vol sampling results for PM10 (respirable dust)- 24 hr standard. Deposited dust has remained below the threshold on all sampling days. Where 0 is shown results are below the Detection Limit.

- Metals:

The Annual Concentration Trigger threshold (health values) used by Galaxy have been recommended by Environmental Technologies & Analytics (ETA). The values were derived from health guidelines published by the

World Health Organisation (WHO) and the United States Environment Protection Agency (USEPA), which differ substantially in some cases. Galaxy have used the lowest value from these guidelines as an 'annual trigger threshold'. If results returned are above the threshold of the annual trigger threshold a more detailed assessment will be completed. Trigger thresholds are derived for longer-term exposure (life- time exposure), not short-term exposure. Metals tested for by the Hi Vol sampling program include Beryllium, Cadmium, Manganese, Hexavalent Chromium (CR VI) and Lithium. To identify if there is a potential concern, a full year of sampling needs to be completed, as the annual trigger threshold is utilised.

Results for Beryllium, Cadmium, Manganese and Lithium are shown below.

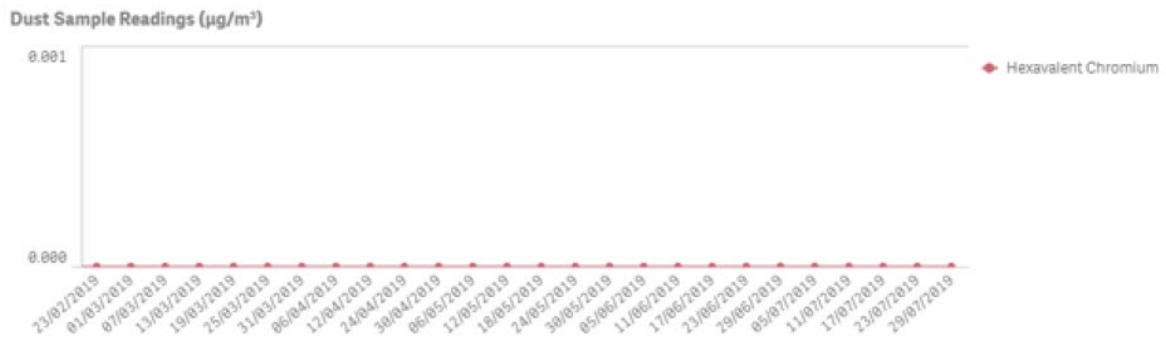


Figure 6: Results in the graph above show results for Chromium/ Hi Vol sampling results for Hexavalent Chromium (respirable dust)- Where 0 is shown results are below the labs Limit of reporting.

Hexavalent Chromium remains below the Labs detection limit for all but one sampling day on the 18/11/2018.

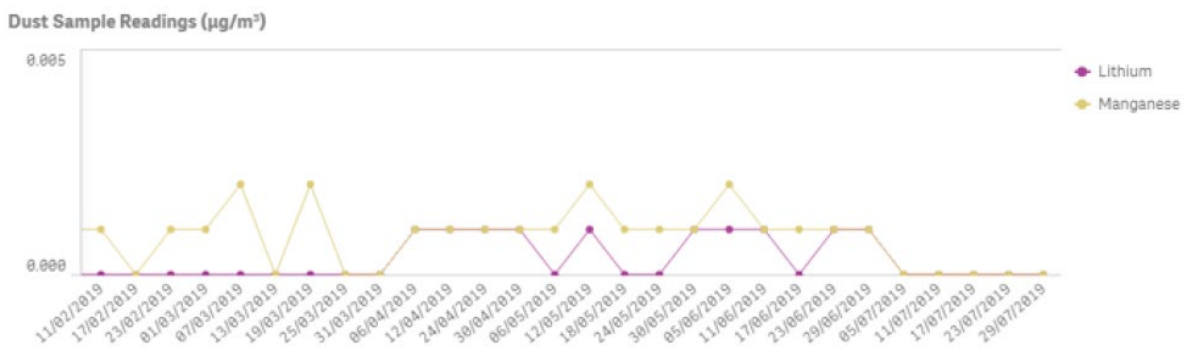
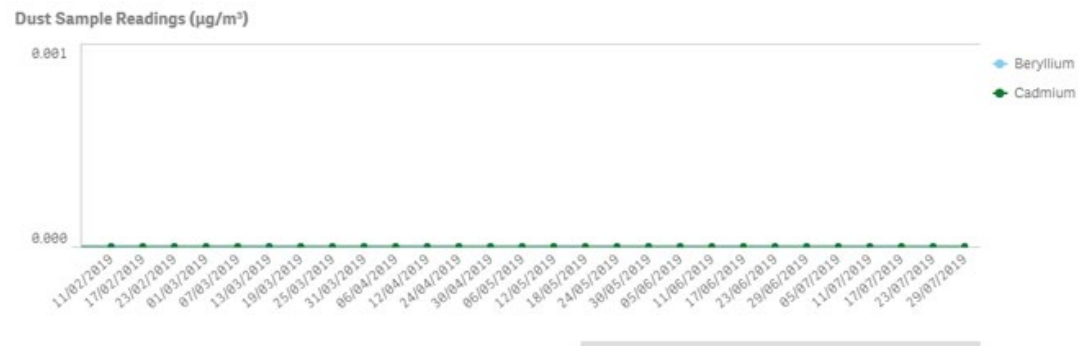


Figure 7,8: The results in the two graphs above show the return results from all sampling days. Where 0 is recorded the results were below detection against the labs limit of reporting (LOR) and could not be assigned a numeric value other than <LOR.

Beryllium remained below the trigger threshold of 0.000400 µg/m² on all sampling days. Cadmium remained below the trigger threshold of 0.0006 µg/m² on all sampling days but one on the 25/09/2019. Lithium remains below the trigger threshold of 0.20 µg/m² on all sampling days. Manganese remains below the trigger threshold of 0.05 µg/m² on all sampling days.

7. COMMUNITY ENGAGEMENT ACTIVITIES

Community information night held on the 23rd July. An overview of the main topics were handed out to the CCG members and will form a part of these minutes as additional information.

- On Friday October 25th Galaxy will be hosting an event “Afternoon with Galaxy”. This is our way of thanking the community for all the support they have given us. It will provide the community a greater understanding what we do at Mt Cattlin. The event will be family friendly including food trucks, inflatable world, face painting, kids craft, Scitech alley shows, games and much more. We encourage you to bring your families along. This will be followed by an after party featuring a live band, food and alcohol will be available for purchase.
- Galaxy assisted in erecting the Lollipop at the Yummylicious Candy Shack.

7.1 Community issues Raised

- No issues raised

8. OTHER BUSINESS

8.1 Stage 2 of Floater Road- (KM)

Design approval has been gained from Main Roads (MR) 9th Sept 2019, the Galaxy project team, engaged Albany Survey to provide Bill of Quantities for the works required for the road and intersection. This information will then be passed on the SoR, for review, ready for development of a tender document. This approved design included MRWA advice a passing bulge is all that is required, a slip lane was nice but not necessary.

- Update: (GS) advised he received on the 11th Sept 2019 the quantities for both the Shire section of the new Floater Road alignment and Main Roads intersection for the project. GS to seek advice from Andrew Duffield, Regional Manager, MRWA how best manage the project with both authority’s involvement. The aim, to have the whole of the works done as one contract. Also need to confirm how the interaction with between SoR / MRWA / will occur during the project. Initial recommendations will be:
- Draft tender to be reviewed and approved by MRWA,
 - Confirm the contract management and inspection process, and

Undertake a select tender with MRWA approved contractors.

- Program: (GS) Considering harvest will begin around Mid-October, and to ensure works don't disrupt grain cartage, SoR will aim to have construction begin at the start of 2020 and completed by Easter 2020.
- Post works: (GS) With the knowledge that the long-term plan is for Floater Road to return to the original alignment. The works will also include, fencing of the unused portion of Floater Road, on the north side of the mine. This section can remain in place and act as a mine/ emergency access road and for later reinstatement of Floater Road. The Old Newdegate portion of the road will be made redundant, and the contractor will recover the material used on this portion of the road, rip and rehabilitate.

8.2 House Inspections- (KM)

We went out to tender and have now selected an independent party to carry out the house inspections at Ravensthorpe. We will not close of the acceptance period for houses until the inspections have ceased. I believe he has commenced reaching out to community members about inspection times. Approximately 30 properties have had an inspection requested. The initial building inspections Galaxy undertook have been completed and follow up inspections will be occurring for those identified as needing further investigation. Contact will be made to all who showed interest for the undertaking of building inspections very soon if contact has not already occurred.

- **Blasting-** (KM) The 27th July was the last time a complaint was received regarding Galaxy's blasting. My background is in blasting and since I have come up in May we have given blasting the attention it required and have also made some simple fixes that have eliminated the concerns shown by the public.
- Harder material does not influence the size of the blast, what it does influence is the number of holes placed in the blast pattern. Holes will not be detonated at one time; they will have a timer delayed. This means that shot will still cover the same initial volume but contain more holes. The blast will then take longer to detonate due to the delays between each hole making the firing sequence longer.
- (KN) When will the second newsletter be coming out, we have been waiting since the end of last year. The minutes are not on the Shire web site, but people are not going to go there and find them. Could we get a simple newsletter stating the dust is safe and what is going on with everything?
 - o (KM) An easier way to share the CCG minutes may be to set up a link set up on the Shire face book page, which can be clicked on to take you to the location of the minutes.
 - o (PM) Galaxy need to consider community comments for Post Mine Closure Land Use. This needs to be consider for inclusion in the Final mine site Mine Closure Plan. Community engagement will be required in the upcoming future to ensure we are able to discuss the post mining land use and get community input on this.

- o (KB) Would it be possible to get a closer look at the closure objectives in the current MCP. To determine Galaxy's committed investments to rehabilitation, overall objectives and the criteria's to be met. A broader discussion with the community is required to determine plausible concepts.
- o (KB) Is it feasible to understand the mounding underneath the TSF, as if extra weight is placed on top of the TSF this will increase the effect of the mounding. I do have concerns that if the in-pit TSF is not properly capped it will create a potential hazard to community members in the form as a pit lake. It should be capped or filled with waste. Has the water level the water table return too been considered as it will fill over time?
- Damage has occurred at the Hawks Nest site by 4WD motor vehicles during the wet period. RHS has requested assistance from Galaxy to provide neutral material that blends in with surface material to assist in blocking the site and fix up road damage.
- Verbal Permission has been gained the Historical society to treat the Blacksmith tree if this would prove beneficial to the tree.
- (KB) Was there a commitment for Galaxy to place another DDG out.
 - o (KM) No commitment was made but we can place out other monitors if grave concerns are held.
 - o (PM) In the placement of the DDG's sites do need to be selected to ensure they meet Australian Standards. This means that we may not be able to place a monitor out if it is in an area that does not allow 1100 angle of open area.
- (KM) Several Lithium miners are struggling in a soft market. Oversupply and the slower than expected growth of Electric Vehicles is to blame. Alita minerals has gone into administration and Galaxy is a major shareholder (circa 12%) of the company. To protect our investment, we have obtained the secured dept of Alita and we have appointed receivers to work with the administrators whilst we are doing a due diligence review.
- The lithium market is quite challenging, so we are looking at all measure to reduce cost. We are in a good position with little dept and a strong balance sheet. Galaxy is looking at active ways to reduce our unit operating cost. Next year the stripping ratio (ton of waste required to be removed for every ton of ore) currently at 1/6 will increase to 1/10. This will increase production cost by 30% to get the same return. We need to consider drastic approaches. Galaxy are looking at having mining ramp up to 24-hour operations. Galaxy currently have over a million dollars per month worth of assets sitting around and not being utilized. Galaxy are submitting our proposal on the 4th of October 2019 for 24hr operations. We need to prove that disturbance in town over the nighttime period meets the noise regulations.

- o (JF) I hate this idea; we will not even be able to sleep with all the noise. If the price of Lithium goes up again will the mining drop back to day light hours or will it continue with 24-hour operations?
- o (KM) We will continue with 24-hour operations.
- o (JF) Galaxy has made such an impact on our end of town, who is going to buy our house, no one is going to buy it, we have put up with a hell of a lot with the mine site, you could not live at the end of Queen St with mining going on 24-hours.
- o (KM) We are not buying properties that falls outside of the affected areas. Where are you located?
 - (JF) At the end of Queen St next to the Camp.
 - (KB) what is the proposed Stakeholder engagement then Keith?
- (KM) This is the first step, as Galaxy are needs to be compliant within the set limits (noise regulations), the next step is to identify surrounding properties which may be affected from the mining. Our modeling indicates there is 1 property where are not compliant, we are in the process of purchasing this one. If anything, change, i.e. the fleet size, there might be up to a dozen or so properties that are affected.

9. NEXT MEETING

Meetings are scheduled to occur the second Thursday of the month at 8am.

- The next scheduled meeting will be held on the 14th November 2019.

10. CLOSE

- Meeting closed @ 09:30 AM, 12/09/2019

Attachments: Community Night overview-23 July 2019

110 SAFETY NOTICE - Dust Event 29 August_1

GXY_Mt Cattlin_Full Site_A2L (map showing current development)

2019-09-Layout_3nw_wd2_rej (map showing future development plans)

GLA050_10-09-02A (map showing Dust monitoring locations relative to town)

GLA050_10-02-01D_A3-licence amendment-2017 (map showing Galaxy monitoring locations)