Discovery of Cement Silo construction at such close proximity of Kordin Grain Terminal

- On 4th January 2013, representatives of Port Health, Mario Camilleri, visited the site and confirmed that the Authority had never been consulted about the cement silo development.
- On 7th January 2013, KGT Management held a meeting with UC Ltd representatives and the latter confirmed that no studies had been carried out on the impact of the cement silo on the storage and transport of grain. (Ref 4)
- On 15th January 2014, the Cement Silo's first consignment was unloaded into the silo.

Kordin grain terminal

Legal Action taken by Kordin Grain Terminal

- On 20th December 2012 - Kordin Grain filed an application seeking the issue of a warrant of prohibitory injunction against Valletta Gateway Terminals in an attempt to stop the construction of the silo.

- By means of a decree dated 17th January 2013, the Court refused to issue the requested warrant of prohibitory injunction stating that VGT was not responsible for the development which Kordin Grain was seeking to stop.

Kordin grain terminal

Legal Action taken by Kordin Grain Terminal

- On 10th January 2013 - Kordin Grain filed a sworn application by which it initiated a court case against VGT Ltd and UC Ltd seeking to stop the development. This case was deferred to the 7th April 2014 for a decision by the Court with regard to Kordin Grain's request for the appointment of a technical expert. On 10th June 2014 a technical expert was appointed. Next Court hearing is on 10th Dec 2014.

Kordin grain terminal

Court Decisions

- On 8th August 2013 - Kordin Grain filed a second application, this time against UC Ltd seeking the issue of a warrant of prohibitory injunction to stop the development and the storage of cement.
- By means of a decree dated 26th August 2013, the Court denied the issue of the requested warrant, stating that the silo was still in its construction phase, and therefore the **warrant was not yet needed** since the construction itself would not cause any damage itself. Furthermore, the **Court observed that despite the fact that the development was reported to the Planning and Health Authorities, neither authority felt the necessity to take any steps to address the situation.**

Kordin grain terminal

Court Sitting

- On 16th January 2014 - Kordin Grain filed its **third application** for the issue of a warrant of prohibitory injunction, this time in an attempt to stop the operation of the silo. On the 15th January 2014, UC were unloading their first consignment of cement into the silo. During these proceedings Kordin Grain discovered that **although a MEPA Permit was said not to be required for the construction of the silo, a permit was required for the silo to be operated.**
- **The Court however, refused the request to issue the warrant. The Court's reasoning in this issue is worth noting:**

Kordin grain terminal

Court Ruling

- “ Dan hu każ li mill-bidunett kellu jiġi trattat b’serjeta’ mill-Gvern, li jinkludi d-Dipartiment għas-Saħħa Pubblika u l-Awtorita’ ta’ Malta dwar l-Ambjent u l-Ippjanar. Ir-riskju li jkollok siment silo bieb u għatba ma’ silos tal-qamħ kellha tiġi trattata qabel sar il-proġett. Jidher li r-rikorrenti bagħtet ittra lid-Dipartiment tas-Saħħa Pubblika datata 5 ta’ Diċembru 2012, fejn esprimiet il-preokkupazzjoni tagħha għall-proġett li kienet ser tagħmel l-intimata u talbet l-intervent tad-Dipartiment. M’hemmx indikazzjoni li d-Dipartiment ħa xi passi dwar dan l-ilment.”

Kordin grain terminal

Environmental Permit to UC Ltd

- In a mail dd 9th October 2013 MEPA Director of Enforcement, Perit Alex Borg states (Ref 6):
- *"I reiterate that the CEO office a year back had informed operator that the cement silo in the Port did not require a planning permission but that this summer it was clarified by same office that an environmental permit was required for its operations. As of this afternoon, the silo is still being constructed and is definitely not in operation. There is hence nothing more to add from an enforcement perspective."*
- KGT finds it inconceivable that, not only was Dr. Stafrace's letter not questioned but irrespective of the legal requirements the cement silo was allowed to be built. Since when does MEPA have to wait for an illegal development to be completed before resorting to enforcement?

Kordin grain terminal

Cement Silo Environmental Permit EP 00025/13/A issued by MEPA

- 6 Other Conditions :

- 6.1 The toilet, cesspit and generator shall not be brought into operation until they are covered by a valid planning permit.

- *6.2 below, was a clause within the draft document issued by MEPA. Once the final permit document was presented, this clause was removed.*

- 6.2 All operation of the installation shall be coordinated with operations of the adjacent Kordin Grain Terminal (KGT) to ensure that loading of the silo with cement does not coincide with when the grain is begin loaded into the KGT silos. (Ref 11)

Kordin grain terminal

are completely responsible to ascertain that all permit conditions are being adhered to and that unauthorised waste does not enter the site;

5.4 The Permitted Installation shall be supervised by staff suitably trained and fully conversant with the requirements of this Permit;

5.5 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to effectively carry out their duties;

5.6 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training;

5.7 All the staff on site should be fully aware of the procedures to be taken in the event of an accidental spill of any liquid other than water and how to contain the environmental hazard; and

6 Other conditions

6.1 The toilet, cesspit and generator shall not be brought into operation until they are covered by a valid planning permit.

6.2 All operations of the installation shall be coordinated with operations of the adjacent Kordin Grain Terminal (KGT) to ensure that loading of the silo with cement does not coincide when grain is being loaded into the KGT silos.

Kordin grain terminal

5.4 The Permitted Installation shall be supervised by staff suitably trained and fully conversant with the requirements of this Permit;

5.5 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to effectively carry out their duties;

5.6 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training;

5.7 All the staff on site should be fully aware of the procedures to be taken in the event of an accidental spill of any liquid other than water and how to contain the environmental hazard; and

6 Other conditions

6.1 The toilet and cesspit shall not be brought into operation until they are covered by a valid planning permit.

Kordin grain terminal

Health Impact Review of proposed cement silo (Ramiro Cali Corleo)

- **This report was submitted by UC Limited to MEPA (Ref 10)** and it supports the concerns raised in the report submitted by Dr Mamo and Dr Cauchi (commissioned by KGT). Dr. Corleo states as follows:
- *"Kordin Grain Terminal is within 100m of the new cement silo operation and since the grain terminal is east to the cement operation it is also downwind where prevalent winds in Malta are concerned and more likely to be impacted* ***from any fugitive cement dust****".*
- In addition, the anticipated emissions during cement unloading at full capacity is not quantified in the reports presented to MEPA and Environmental Health Directorate.
- A **Monitoring Plan** was submitted by UC Limited to address the increase in dust emission during the Cement Silo Operation.

Kordin
grain terminal

Approval of Cement Silo Development

- Subject to the implementation of this plan, the development was approved.
- The Technical member on the MEPA Board, Prof. Victor Axiaq, raised concerns about the selection of the parameters for the monitoring plan proposed by UC Ltd.
- It is important that these parameters are re-assessed and proposed by the authority, not the operator.
- Meanwhile the outcome of a recent meeting held on 10th October 2014 with Environmental Health Directorate it resulted that: (Ref 12)
- **The Environmental Health Directorate is not monitoring the data and their recommendation was to approach MEPA directly;**
- We also discussed the possibility of testing commodities for heavy metals. Port Health of the Environmental Health Dept. Mr. Mario Cassar, explained that the sampling and sample processing offers an extremely difficult situation to maintain the stability of the analyte and **hence it is not practical to implement.**

Kordin grain terminal

A Public Health perspective on a Cement Silo Development at the Kordin Grain Terminal Wharves

- Dr. Julian Mamo MD, PhD and Dr. John Paul Cauchi MD, MSc wrote a report to comment from a public health perspective on the development of a cement silo in immediate proximity to a raw grain complex. (Ref 8)

- They concluded that based on the scientific knowledge and the evidence of information available, they feel that the operations of the cement silo will be of potential detriment to the health of the general public which, through the consumption of grain-based products such as bread, etc., will be exposed to the possible ingestion of toxic materials that are present in cement dust.

Kordin grain terminal

Review Article

Potential Health Risks due to Consumption of Food Contaminated from the Cement Production

José J. Vargas MD, Roberto Vega VMD, Melvin Colón MEM, MFMC

Abstract: A review of the scientific literature related to the trace elements in dust particulates (Heavy Metals) and dioxin derivates typical pollutants of a normal operation of a cement plant, and the theoretical consequences of these metals and dioxins exposure on food products, as well as the potential food chain hazard for the human if the contaminated food is ingested. Empirical knowledge of the occurrence and concentration of trace elements in dust particulates from and around industrial establishments is essential to know the source of pollutants and atmosphere quality. For this specific analysis, it was considered that the dust particulates from a cement factory contain a variable amount of certain elements, some of which pose a major health risk. This analysis includes the risks from the exposure pathways characterized by dust inhalation by animals processed for human ingestion, consumption of commercially contaminated produced foodstuffs, and the estimated clinical effect of contaminated food consumption in the human body. This analysis does not apply to a geochemical database of a specific urban conurbation. After performing the literature analysis, the results showed that food grown and beef plants near a cement plant represents at the end of the chain a significant health risk to the average person. Also, more vulnerable population, such as the children subgroup seems to be subject to hazards greater than other subgroups. This study emphasizes the importance of performing extensive environmental risk assessment studies when a cement plant is to be assembled close to region where there are an established animal farms and plants dedicated to foodstuffs production.

Key Words: cement, heavy metals, contamination, soil, animals, foodstuffs

INTRODUCTION

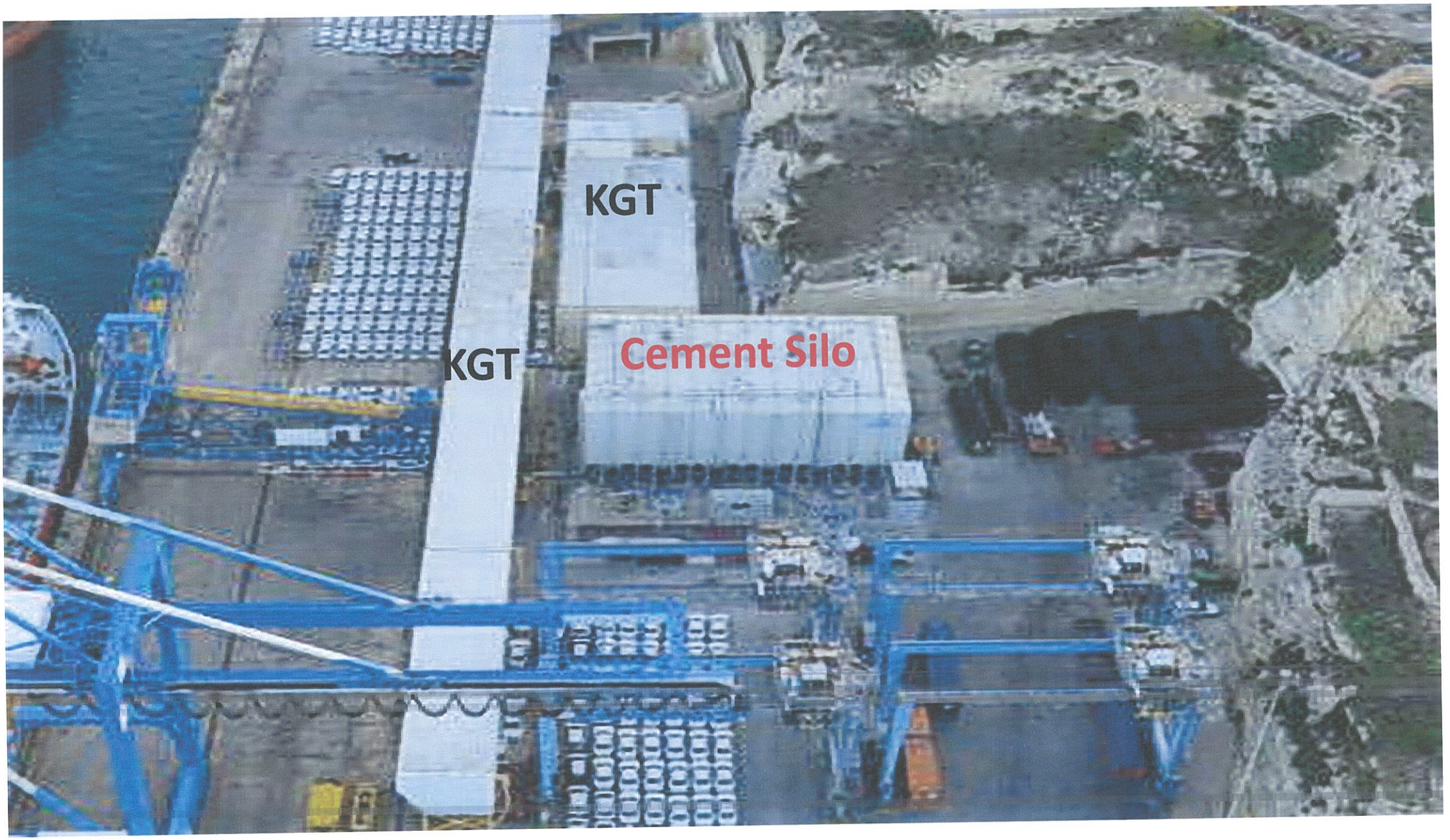
The intention in this review is to provide a theoretical overview of some general concepts of metal toxicology when contamination of the food chain is caused by the pollution originating from a cement plant's emissions.

The contamination of food chain by hazardous elements and environmental chemical contaminants has become worldwide public health trepidation and also a leading cause of trade obstacles internationally. As part of the literature review, the corresponding emissions produced by a cement plant were examined, the possibilities of those contaminants to pollute the soil, air, and water in its vicinity were analyzed, the effect on animals and on nearby food processing plants and the consequences on the human health if the contaminated food or animals are to be consumed in the diet for a prolonged period of time was also examined. This exercise was based on the scientific literature data on the constituents and component of the particulate dust and the gases emanated as part of the normal cement manufacturing process.

The impact of exposure or ingestion of chemical contaminants on consumer health is often apparent only after many years of prolonged exposure at low levels (e.g., cancer). To evaluate the effect of this contamination in an acute, short term, and time constraint scenario may only lead to confusing conclusions and inaccurate results. That is why, a review of the extensive scientific literature produce and available on the particulars of this topic over the last twenty years, is the essence for this exercise in order to clearly appreciate and realize the magnitudes of the potential problems arising for a long term exposure to contaminants as well as to comprehend the advantages of taking early action either prior to installing a cement plant nearby a region where there are animals designated for human consumption and established plants dedicated to foodstuffs production, or after all facilities are in operation.

Since 1976, the World Health Organization (WHO) has implemented the Global Environmental Monitoring System-Food Contamination Monitoring and Assessment Programme (GEMS/Food), which has informed governments through a methodical database of the information needed to prevent food contamination. The GEMS/Food's data on levels and trends of contaminants in food, their contribution to total human exposure and significance with regard to public health and trade has been made available for relevant institutions, as well as the general public.

(GEMS/Food) encourages all countries, in particular the


KGT
KGT
Cement Silo

Conclusion

- Kordin Grain is duty bound to ensure the safety of the product being handled and stored at the grain terminal and considers this issue as its **Corporate Social Responsibility.**
- UC Risk Assessment Report was carried out in isolation, not considering the impact the cement silo will have on the Grain Terminal. (Ref 9)
- Kordin Grain Terminal applies the **precautionary principle**, having the responsibility to avoid contamination of the grains from neighbouring activities.

Kordin
grain terminal

Why should we apply the Precautionary Principle?

- **Contamination of Grain with trace amounts of heavy metals will not be detected with current instrument sensitivity. So one has to assume that contamination is present.**
- "The food groups that contribute to the major part of the dietary heavy metal exposure, primarily because of the high consumption, were cereal and cereal products, ….." taken from EFSA Scientific opinion, The EFSA Journal (2009) 980, p2
- Given that intake of grain-related products starts from early development, including lactating newborns, baby food products and every day intake of wheat derived products, the **accumulation of trace elements in a life time is a public health concern.**

Kordin
grain terminal

- As a Critical National Infrastructure, Kordin Grain is duty-bound to exhaust every legal remedy which may be available to stop the functioning of the adjacent cement silo in light of its obligation to care for the health of consumers of its products.

- To quote Dr. Godfrey Farrugia, ex-Minister for Health, during the last House Committee meeting :

Kordin
grain terminal

"If health fails, then everything else fails."

Kordin
grain terminal

THANK YOU

Kordin
grain terminal