

**FINDINGS OF A JOINT PRELIMINARY INVESTIGATION INTO
THE COMPLIANCE PROFILE OF UPL SOUTH AFRICA (PTY)
LIMITED CORNUBIA, KWAZULU-NATAL**

August 2021



The findings of the preliminary investigation which are set out in this report are based on the information at the disposal of the multi departmental investigative team at the time of finalising the report (end of August 2021).

CONTENTS:

Executive Summary	4
Key Findings	4
<i>Before the fire incident:</i>	4
<i>After the fire incident:</i>	6
Recommendations	7
A. INTRODUCTION AND OBJECTIVE	9
1. Purpose.....	9
2. Structure of Report	9
3. Description of the Incident.....	10
<i>Air Quality</i>	10
<i>Fresh Water:</i>	11
<i>Estuarine</i>	12
4. Response to the Incident	12
<i>Priority 1:</i>	12
<i>Priority 2:</i>	13
<i>Priority 3:</i>	15
B. FINDINGS IN RELATION TO THE PRELIMINARY INVESTIGATION	16
1. Relevant entities	16
2. Mandate of the Authorities and Regulatory Framework.....	18
2.1 <i>Department of Water and Sanitation (“DWS”)</i>	18
<i>Prior to the fire incident</i>	18
<i>After the fire incident</i>	19
2.2 <i>National Department of Health (“DOH”):</i>	20
<i>Prior to the Fire incident</i>	21
<i>After the fire incident</i>	21
2.3 <i>KwaZulu-Natal Nature Conservation Board and Service (Ezemvelo KZN Wildlife)</i>	22
<i>Prior to the fire incident:</i>	23
<i>After the fire incident:</i>	23
2.4 <i>Kwazulu Natal Department of Economic Development, Tourism and Environmental Affairs (“EDTEA”), supported by the Department Of Forestry, Fisheries and the Environment</i>	28
<i>Prior to the fire incident</i>	28
<i>After the fire incident:</i>	30
2.5 <i>Ethekwini Metropolitan Municipality (“EThekwini”)</i>	32

Prior to the fire incident	32
2.5.1 Development Planning, Environment and Management Unit.....	32
Buildings Plans, Zoning and Certificates of Occupation.....	32
Building Plan Approval	33
Activity:.....	34
Administrative Enforcement Notices	34
2.5.2 Environmental Planning and Climate Protection Department (EPCPD): General environmental management advice and support.....	35
2.5.3 The Health Unit:	36
Schedule Activities Permit.....	36
2.5.4 Fire & Emergency Services (FES)	37
Fire By-laws	37
2.5.5 Potential contravention of Municipal By-Laws:.....	37
2.6 National Department of Agriculture, Land Reform and Rural Development (DALRRD)	38
2.7 National Department of Employment and Labour.....	39
3. Summary of Key Findings.....	41
Before the fire incident	41
After the fire incident	42
C. RECOMMENDATIONS	44
REFERENCES	

Executive Summary

A multi-departmental team has been investigating the UPL South Africa (Pty) Limited (“UPL”) fire incident and resulting widespread pollution within the ambit of the regulatory environment applicable to such a facility and in particular the compliance profile of those entities involved. This preliminary investigation involved a factual assessment of the permissions/authorisations that were required by a facility of this nature prior to the fire incident and whether the facility was in compliance with the applicable legal requirements. This report was prepared with input from all the affected authorities which exercise a regulatory function over a facility of this nature. The report sets out the findings of this investigation, in addition to proposing recommendations on the way forward based on the findings, including the need for further investigation in line with the enforcement interventions required to ensure that those responsible are held accountable for their actions.

It is important to note upfront that the environmental right is anthropocentrically framed. For this reason, the environmental right places human beings at the centre of environmental decision making and by implication the response by the authorities in this particular situation was motivated by the need to give effect to this inherent right. As such, it is important to reflect on the definition of environment as contained in the National Environmental Management Act, Act 107 of 1998 (“NEMA”) for a moment which provides as follows:

“environment” means the surroundings within which humans exist and that are made up of—
 (i) the land, water and atmosphere of the earth;
 (ii) micro-organisms, plant and animal life;
 (iii) any part or combination of (i) and (ii) and the inter-relationships among and between them; and
 (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being;

and section 2(2) of NEMA, which requires that

“environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably”.

The key findings of the investigation are set out below followed by a summary of the recommended way forward.

Key Findings:

Before the fire incident:

- UPL established its operations within a warehouse located in Cornubia KZN, prior to the civil unrest that occurred during the period 12-16 July 2021. On the information currently available to the investigative team, UPL’s operations involved the unlawful storage of chemicals classified as “a dangerous good”.

The following is noted:

- The volumes of chemicals stored in the warehouse was significant, exceeding a volume of 500 cubic metres, therefore constituting a “Listed Activity” identified in terms of section 24(2)(a) of NEMA in Government Notice R984 in *Government Gazette* 38282 of 4 December 2014 and amended by Government Notices 325 of 7 April 2017 and 517 of 11 June 2021, an activity that may not commence without environmental authorisation (EA);
- An Environmental Authorisation (EA) in terms of the NEMA would have been required prior to the storage operations commencing. It would have been necessary to follow an environmental impact assessment process and to submit all relevant documents and reports to the competent authority to enable it to make a decision on whether or not to issue an EA. This process would have, among other things, assessed the readiness of the facility to respond to an emergency situation. Furthermore, any EA issued would have been subject to a number of conditions aimed at mitigating risks identified;
- It is the view of the investigative team that UPL may not have undertaken the necessary assessment required in terms of the Occupational Health and Safety Act (OHSA) read with the Major Hazard Installation (MHI) Regulations. This risk assessment process would have determined whether or not this facility constituted an MHI as defined in the OHSA. However, and considering the volumes and nature of the chemicals stored at this particular location, it is reasonable to conclude (based on the information at the disposal of the investigative team) that the facility fell within the definition of a MHI and was subject to the legal requirements for such installations;
- A Scheduled Activities Permit (SAP) was not obtained by UPL from the eThekweni Metropolitan Municipality. This SAP would have taken into consideration the requirements of the risk assessment which was one of the steps to determine whether or not this facility would require MHI certification. The SAP would have also been subject to a number of conditions aimed at mitigating risks identified;
- The building plan for a proposed subdivision of the warehouse for use by two tenants and proposed flammable liquids store was recommended for approval by the eThekweni Fire Department; however, approval for occupation would only have been supported after the subdivision was constructed and was deemed compliant with fire requirements which was required before the business could be operated;

- The occupation of this warehouse by two different tenants was not authorised by EThekweni.

After the fire incident:

- The unlawful establishment and operation of the UPL facility created a point source of pollution in that particular location, close to a river system, a residential neighbourhood, a sensitive protected area and the coastal environment. Notwithstanding the catalyst which triggered the pollution event, it is appropriate to consider the significant damage which resulted **after** the fire incident, in particular as it relates to the following:
 - In addition to general aesthetic considerations of any area, the Umhlanga Lagoon Nature Reserve was afforded an additional layer of protection as set out in the National Environmental Management: Protected Areas Act, National Environmental Management: Biodiversity Act and the KwaZulu-Natal Nature Conservation Ordinance 15 of 1974. This area is considered to be irreversibly damaged as a result of the pollution from this incident which may have resulted in an entire ecosystem service loss. The impact on ecotourism of, not only this reserve, but the whole of the town of Umhlanga was impacted and may be impacted for a considerable period of time. Contraventions of the legislation governing protected areas and biodiversity attract serious penalties.
 - In addition to the above, the National Environmental Management Act as well as the National Water Act recognises that any unlawful and intentional or negligent conduct which results in serious pollution or degradation of the environment and a water resource is considered to constitute criminal conduct. Further investigation is required to determine whether UPL, as a result of its failure to comply with specific legal requirements (either in terms of NEMA or other relevant legislation), acted negligently by creating a point source of pollution which resulted in significant environmental impacts, despite the fact that the fire was started by other individuals.
 - In addition to the acts or omissions giving rise to environmental degradation, the failure to obtain licences, permits or authorisations where these are required by law, constitute criminal offences under the relevant legislation.
 - Had the relevant licences been applied for, the environmental assessment processes that would have been required, may have identified risks that could have been avoided, or could have been guarded against. The desirability of storing large quantities of agricultural chemicals in close proximity to people and sensitive environments would have been evaluated. Bypassing these processes, no doubt, contributed to the seriousness of the pollution that resulted.

Recommendations:

There are a number of considerations which need to be further investigated in order to arrive at a definitive conclusion in relation to this matter. It will therefore be necessary to proceed with caution considering that any information obtained / collected may need to be presented as evidence in a criminal court. For this reason, the following is recommended:

In relation to the “incident”

1. An independent team of investigators comprising of Environmental Management Inspectors from the DFFE and the EDTEA should urgently initiate a criminal investigation. This team will be led by DFFE. The team will work closely with those authorities which are mandated in terms of the other applicable legislation and regulatory requirements.
2. The criminal investigation should consider the role of the various entities, namely Tongaat, Fortress and UPL.
3. Samples of the various affected media must be taken immediately in line with protocols for criminal investigation
4. Although this report only summarises briefly the actions taken to respond to this incident, the response of the authorities to the incident should be evaluated and any failings identified for appropriate departmental action.

As a broader investigation

5. A baseline compliance profile assessment of the agrochemical storage and manufacturing sector and based on the outcome of this assessment must be undertaken, and if necessary a compliance and/or enforcement programme targeting the sector should be developed.
6. Given the range of authorisations required by the sector, the scope of the above assessment could also include a review of the protocols / processes within the different relevant departments / units with the aim of streamlining these processes and improving communication and co-ordination.
7. Based on the evaluation of the authorities' response to this incident, a need to establish an interdepartmental rapid emergency response team to deal with a certain category of incidents, comprising technical experts within the government structures should be determined.
8. In order to ensure certainty in relation to which authority within government is best placed to lead an intergovernmental response to high-risk emergency incidents, an assessment should be undertaken of whether or not the environmental risk posed by the incident should be used as a guide to assign such a

competence. In this regard the provisions of Section 30 of the NEMA, as far as it relates to the definition of “a *relevant authority*”, should be reviewed.

9. Likewise, the apparent hierarchy created by section 30(2), which determines the order in which relevant authorities can or should take steps, should be reviewed.
10. Depending on the review of section 30 of NEMA, possible amendments to the legislation should be considered.
11. The establishment of a panel of intergovernmental specialists which could be called upon to provide expert advice when dealing with these types of emergency responses should be considered.
12. The feasibility of creating a mobile command centre which has the basic equipment which can be used to assist in a government response to these types of incidents should be considered.

A. INTRODUCTION AND OBJECTIVE

1. Purpose

A multi-departmental team has been investigating the UPL Limited (Pty) Ltd South Africa fire incident and resulting widespread pollution within the ambit of the regulatory environment applicable to such a facility and in particular, the compliance profile of those entities involved. The investigation involved a factual assessment of all permissions/authorisations that were required by a facility of this nature prior to the fire incident and the applicable legal requirements. This report was prepared with input from all the affected authorities which exercise a regulatory function over a facility of this nature.

The purpose of this document is to:

- summarise the interventions and response by the relevant authorities to contain the pollution and ensure remediation of the environment;
- identify statutory offences and/or non-compliances by UPL;
- make findings and conclusions on the available information;
- make recommendations on the way forward.

2. Structure of Report

The report is structured into the following three components:

- A. Introduction: A description of the incident, the environmental impact and response to the incident
- B. The findings in relation to the compliance profile of UPL which is set out in two parts:
 - 2.1 A factual enquiry into the compliance profile of UPL relative to all statutory permissions (licences and permits) which are required to lawfully operate a business of this nature **prior** to the operation of the warehouse located in Cornubia, KZN. Within this section of the report, the recourse which is described in law is reflected and the practical application by the relevant authorities when breaches are detected is set out, where possible; and,
 - 2.2 An enquiry into the relevant laws which have been triggered following the fire incident at the warehouse.
- C. Recommendations in relation to the way forward as well as concluding remarks.

3. Description of the Incident

During the unrest which prevailed in the country, in particular the Kwa-Zulu Natal and the Gauteng provinces over the period 12 – 16 July 2021, the UPL warehouse was one of the many buildings that were damaged (in this case by fire) during the incidents of looting and destruction of property, which took place during this period.

The contents of the UPL facility comprised a wide range of herbicides, fungicides, non-specific insecticides, as well as a range of specific target products including, but not limited to, miticides, nematicides acaricides, rodenticides, and surfactants, fertilisers and a range of other fumigants and attractants.

The environmental impact which resulted from this incident caused an environmental catastrophe, which not only impacted on human health, but may have irreversibly impacted an entire ecosystem ranging from the oHlanga tributary, the uMhlanga estuary, the beaches and the coastal environment, reaching several kilometres beyond the estuary mouth.

The fire at the warehouse lasted for approximately 12 (twelve) days. The investigative team were advised that the ability to extinguish the fire was hampered by a number of factors, including security related concerns linked to the unrest, access to adequate water supply, personal protective equipment, and the collapse of the metal structure which required demolition teams to cut through metal debris in order to ensure safe passage for the fire fighters to smouldering pockets of materials.

The environmental damage was immediate. The instant die off of fish was estimated to be in the region of 3.5 tonnes. The impact on the riparian vegetation compared to a bench marked site in close proximity of the Umhlanga estuary, demonstrates a clear and visible impact.

According to the information included in the weekly report dated the 25th of August 2021 the following serves as a summary of the affected environmental media:

Air Quality:¹

“2. Initial Conclusions

2.1 Conditions when the fire was still burning

- *High levels of dust and ammonia were detected on and adjacent to the site.*
- *Outset samples showed sulphur dioxide but this soon diminished to background levels.*

¹ Hurt, Quentin, 16 August 2021, Skyside: Air Monitoring UPL Fire, Cornubia, Durban. Updates of 16 August 2021 – Preliminary Report for Working Group Information.

- *A range of volatile organic compound was measured on the site but their concentrations also receded quickly*

2.2 Conditions after the extinguishing of the fire

- *Dust was still of concern when testing directly downwind of the site but the daily average concentrations for PM-10 were within the National Ambient Air Quality Objectives*
- *Levels of PM-2.5 exceeded objectives on certain days.*
- *Phosphorous in the dust was comparable with levels measured about 20 km away during a monitoring campaign conducted in 2020, suggesting that phosphorous levels were similar to regional background concentrations.*
- *The smell from the site persisted and appeared to be associated with ammonia as a trace gas.....”*

Fresh Water:²

“Freshwater results received to date indicate that the system has been highly impacted by the pollution event with the water downstream of the spill site, and upstream of the confluence with the Ohlanga, being considered to possess a “very high acute/ short chronic toxicity” hazard. This resulted in the widescale death of aquatic organisms that was witnessed in the area following the spill. Biomonitoring along the tributary, as well as downstream of the N2 bridge, revealed little life to be present in the system. Interestingly, biological and water chemistry sampling undertaken on the Ohlanga upstream of its confluence with the impacted tributary indicated that the river is also highly polluted. However, the determinands contributing to its polluted state largely differ to those driving the poor condition of the tributary.

A notable die off of vegetation along the impacted watercourse has been observed on site. Drone surveys of the spill site and surrounding areas have supported this observation, with a strong signature of vegetal die off noted on the multispectral and high resolution RGB imagery.

On site remediation activities are being undertaken on an ongoing basis. Water and sediment samples have been collected both pre – and post cleaning and have been submitted for analysis in order to assess the efficacy of the stream cleaning methodology. Bioremediation options are still under investigation and suitable options will be recommended”

² King, Vicky, 25 August 2021. Weekly Report in terms of section 6.7 of the Directive in terms of the National Environmental Management Act, 1998 (Act No 107 of 1998 as amended regarding the alleged arson incident resulting in the release of pesticide/ insecticide at United Phosphorous Limited (UPL) Warehouse situated at 30 Umganu Road in Cornubia. Located within the Ethekwini Municipality.

Estuarine:

“Observations during the estuary sampling last week indicated that the estuary which has been open since the 15th August was in the process of closing. Complete mouth closure was predicted to occur on Friday 19th or Saturday 20th. The signs at the estuary were of an environment which is still in deep distress. A deposit/ residue on the sand in the region of the mouth during the low tide was examined carefully to try to diagnose source. A sample was taken of the deposit and sent to V&M for metal and pesticide analysis to try to clarify and quantify these compounds present”

4. Response to the Incident

The immediate response from the authorities to this particular incident was focused on three priorities as set out below.

Priority 1:

To Implement short to medium term emergency interventions to ensure that further environmental and health risks were contained, including actions to prevent further effluent from entering the river system. The following short to medium term emergency interventions were initiated by UPL and the authorities immediately when the source was found to emanate from the UPL warehouse:

- Intensive operations to ensure that the fire was extinguished in the shortest possible time. To this extent, demolition companies were employed to cut through the metal structure which had caved in on itself and prevented access to pockets of smouldering material;
- Two spill response companies were mobilised to mitigate the runoff from the site;
- Emergency control measures were implemented at the discharge outlets and berms were placed within the river system;
- All storm water discharge points were blocked in order to ensure that no discharge was entering into the receiving watercourse and to prevent further contamination influx;
- The erosion control weirs were raised with sandbags;
- Contaminated water from behind blocked storm water discharge points and raised weirs was pumped out;
- Contaminated sediments in the watercourse were removed. This is currently an ongoing exercise;
- Lime and carbon barriers are currently being added to the water in order to breakdown the molecular structure of the contaminates which occur within the system;
- At the time of writing up this report, all beaches were closed in the vicinity of the uMhlanga estuary;

- No harvesting (fishing) or swimming is allowed until samples are analysed and decisions made in relation to safety for public health and consumption. The *status quo* in this regard remains as at date of finalising this report.

Priority 2:

To oversee and guide the assessment, clean-up and remediation process. This guidance has come in the form of administrative enforcement notices and the facilitation of a coordinated intergovernmental response to the current situation.

The following administrative notices were issued to UPL by the authorities to direct the response:

Table 1: Administrative enforcement notices issued to date

Administrative Enforcement Notice Type	Date issued	Reason
NEMA S28 Pre-Directives by the EDTEA	20 and 28 July 2021	<ul style="list-style-type: none"> • Confirm the urgent interventions that were currently being implemented • Amended to integrate DWS requirements
eThekwini administrative notice	16 July 2021	<ul style="list-style-type: none"> • Submit a Section 30 incident report; • Containment of the contaminated water; • Removal of the waste to an accredited disposal facility; • Appointment of Air Quality Specialists (sampling and modelling) and human Health Risk Assessment, Ecological and geohydrological specialists
Directive in terms of Section 30(6) of the NEMA	17 August 2021	<ul style="list-style-type: none"> • Confirm appointment specialists required to compile the specialist reports • Direct Waste management disposal • Clean-up and initial remediation of the river and wetland area • Estuarine, coastal and marine • Outline of the communication protocol • Outline of the remediation action plan • Monitoring protocol

In order to ensure that the actions of 8 (eight) different authorities were aligned, a Joint Operational Centre (JOC) was established, in particular to address Priority 1 and Priority 2 above. The roles of each of the authorities are briefly described in the table below:

Institution	Function
Kwa Zulu Natal Department: Economic Development, Tourism and Environmental Affairs	<ul style="list-style-type: none"> • Authority leading the integrated response • Chair of the JOC • Compliance and Enforcement – Directives (S30 of NEMA) • Media and communications
EThekweni Metropolitan Municipality	<ul style="list-style-type: none"> • Fire Department – first responders • Air Quality and Health Risk Assessment • Environmental Health response • Decision makers in terms of beach closure and opening • Media and communication / community engagement
Ezemvelo KZN Wildlife	<ul style="list-style-type: none"> • Conservation authority - management of estuary and expert advice in terms of long term management objectives for this particular estuary • Compliance and Enforcement of the NEMPAA, NEMBA and provincial Ordinance
Department of Forestry, Fisheries and the Environment	<ul style="list-style-type: none"> • Seconded specialists – Wetlands (aquatics), Health Risk (Epidemiology), Waste, Oceans and Coast • Hazardous Waste Management
Department of Water Affairs and Sanitation	<ul style="list-style-type: none"> • Water management and approval of remediation undertakings within the freshwater system
Department of Agriculture	<ul style="list-style-type: none"> • Advice in terms of regulatory approvals • List of chemicals – international import/ exports
Department of Employment and Labour	<ul style="list-style-type: none"> • Occupational Health and Safety (including Major Hazard Installation regulations)
Department of Health	<ul style="list-style-type: none"> • Hazardous Substances Act • Epidemiological response advice • Qualitative Health Analysis • Involved in “door to door” health surveys in collaboration with private clinicians in the Cornubia area

Priority 3:

Investigate the incident within the ambit of the regulatory environment applicable to such a facility. This investigation has included the following:

- the legality of the operation of the warehouse UPL with reference to:
 - the permits/licences/authorisations were required;
 - the permits etc. that were applied for, if any;
 - permits/licences/authorisations that were refused, if any;
 - the permits/licences/authorisations that were issued.
- accountability for the actions leading to environmental damage.

This priority involves an assessment of the regulatory approvals that were required by UPL in order to operate at this particular warehouse and includes gaining an understanding of the extent to which the failure to obtain any required permit/licence/authorisation contributed to the severity of the environmental damage or compromised the preparedness of the authorities to deal with the incident.

This report reflects the ***preliminary findings*** of this investigation.

B. FINDINGS IN RELATION TO THE PRELIMINARY INVESTIGATION

This section of the report sets out the findings of the preliminary investigation. Following a brief discussion of the entities involved, the mandates of the various authorities are set out together with the relevant regulatory requirements. The findings on whether or not these legal requirements have been contravened are also provided in respect of each authority's mandate, both in respect of the period before the fire and then following the fire incident.

1. Relevant entities

The entities recorded below were responsible at various stages for either obtaining or complying with various legal requirements. The exact terms of the relationship are not entirely clear at this stage but will form part of a further investigation.

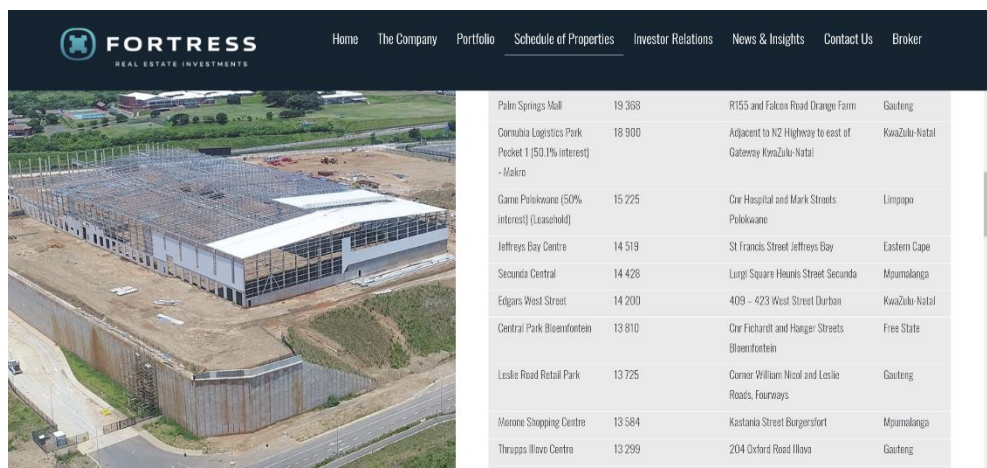
Tongaat Hulett Developments (Pty) Ltd ("Tongaat Hulett"), as the property owner in relation to the Cornubia development complex together with the eThekweni Metropolitan Municipality, were the applicants for and holders of the Environmental Authorisation issued in respect of this complex. Tongaat Hulett entered into an agreement with Fortress REIT Limited ("Fortress REIT") for the development of certain areas of the Cornubia complex. The exact details and/or the terms of the agreement is not clear at this stage and will need to be investigated further.



Location of the UPL warehouse

Fortress REIT is a South African based company with thirteen active directors. Its principal description is a property holding and investment company. Its physical address is Cullinan Place - Bloc C, Cullinan Close, Morningside, Gauteng, 2196. Its website <https://fortressfund.co.za/> lists the following related developments:

- Retail: Cornubia Logistics Park Pocket 1 (50.1% interest) - Makro
- Development: Cornubia Ridge Logistics Park



The UPL facility:

The warehouse facility indicated in the picture above was leased from Fortress REIT by an international company United Phosphorous Limited (UPL). UPL's South African branch website (<https://www.upl-ltd.com/za>) lists Mr Marcel Dreyer as the Regional Head of Africa and Middle East and the contact landline number (27315145600) links to a company called Arysta Lifescience. No business profiles were found within the South African Company database. It is assumed that Arysta is also an international company. Both also share the same company Head Office Address 7 Sunbury Office Park, Douglas Saunders Drive La Lucia Ridge.

An internet search³ reveals that UPL purchased Arysta in July 2018: *The agreement effecting this transaction was signed in July 2018. UPL acquired Arysta through its wholly-owned arm, UPL Corp, in which Abu Dhabi Investment Authority (ADIA) and TPG infused \$1.2 billion to acquire 22 per cent stake, with UPL Lts holding the remaining 78 per cent.*

The relationship between these entities must be further investigated.

³ https://www.business-standard.com/article/companies/with-4-2-bn-arysta-deal-done-upl-is-world-s-top-5-farm-solutions-firm-119020400973_1.html

2. Mandate of the Authorities and Regulatory Framework

This section of the report explores the mandate of each of the relevant authorities as well as the legal requirements applicable within the context of this incident. We examine the legal requirements both prior to the fire incident as well as those that were triggered after the incident.

2.1 Department of Water and Sanitation (“DWS”):

The DWS as the custodian of South Africa's water resources must ensure that these resources are protected, used, developed, conserved and managed in the public interest. The DWS issues Water Use Licences (“WUL”) as provided for in Section 40 of the National Water Act, 1998 (Act No. 36 of 1998) (“NWA”). The respective water uses for which a WUL is required is described in section 21 of the NWA. Prior to issuing a WUL, an application is subjected to various administrative and technical assessments as described in section 41(1) and 41(2) of the NWA. The respective water uses for which a WUL is required is described in section 21 of the NWA.

Prior to the fire incident:

DWS exercised its regulatory function in relation to the entity, Tongaat Hulett Developments (Pty) Ltd (“Tongaat Hulett”) prior to the fire incident. DWS issued a WUL to Tongaat Hulett (Ref: 05/U30B/ABC/4036 on the 22nd of September 2016 for Cornubia Phase 2. This WUL was subject to conditions for issue as provided for in Section 29 of the NWA.

The WUL authorised the following water uses:

- a. Section 21 (b) *storing water* – which was triggered for the construction of an attenuation structure;
- b. Section 21 (c) *impeding or diverting the flow of water in a watercourse* – which was triggered by virtue of infrastructure which would cross wetlands and rivers; and,
- c. Section 21 (i) *altering the bed, banks, course or characteristics of a watercourse* – which was triggered since certain activities / development was to occur within the regulated area which is 500-meter radius from the boundary of wetlands.

Although the WUL application requested authorisation to *take water from a water resource* as per section 21(a) of the NWA; it was found that this particular water use was already approved within the scope of the WUL that was issued for Phase 1 and the Retail Park. The water use described under section 21(a) was accordingly removed from this WUL.

The DWS within its regulatory mandate regarding the situation *prior to the fire incident* concluded as follows:

- The water supply and sewage / waste water disposal for the development would have further required authority from eThekweni;
- The DWS further confirmed that a WUL was not required by UPL prior to and/or for the duration of its occupation of the warehouse at this particular location.

The facts placed before DWS when asked for confirmation that no WUL was required, are not known. Had the volume and type of chemicals proposed to be stored by UPL been disclosed, DWS may have reached a different conclusion, given the risks that this might have posed to the nearby water resource. This requires further investigation.

After the fire incident:

Concerning the pollution of the water resources affected by the fire incident, Section 151 of the NWA provides that no person may:

- unlawfully and intentionally or negligently commit any act or omission which pollutes or is likely to pollute a water resource;⁴ and/ or,
- unlawfully and intentionally or negligently commit any act or omission which detrimentally affects or is likely to affect a water resource.⁵

When a damaging activity is detected that pollutes or detrimentally affects a water resource, the DWS in practice would, in addition to criminal investigation, resort to issuing Directives in terms of sections 19(3),⁶ 20(4),⁷ or 53,⁸ of the NWA in order to address the harm that is being caused to the receiving environment. Failure to comply with these Directives constitutes a criminal offence in terms of section 151.⁹

The penalties contained in the NWA are severe. Upon first conviction, a court may impose a fine or imprisonment for a period not exceeding five years, or to both a fine and such imprisonment and, in the case

⁴ Section 151(i) of the NWA.

⁵ Section 151(j) of the NWA.

⁶ Section 19(1) of the NWA provides for a Directive to be issued in order to prevent and remedy the effects of pollution. The application of this Directive applies to any activity or process which is performed or undertaken or a situation exists which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring

⁷ Section 20(5) provides for verbal directives to be issued in order to control an emergency incident.

⁸ Section 53(1) Directives may be issued for in order to address an unlawful use of water as described under Chapter 4 of the NWA and or a term or condition which applies to any authority to use water.

⁹ Section 151(d) of the NWA.

of a second or subsequent conviction, to a fine or imprisonment for a period not exceeding ten years or to both a fine and such imprisonment.¹⁰

It should finally be noted that in relation to this particular matter, the DWS:

1. Issued UPL with a verbal approval, which was later confirmed through a written email, in order to effect the stream diversion as part of the proposed clean up and stream remediation strategy;
2. The requirements of section 20 of the NWA (which deals emergency incidents under the NWA) were integrated into the joint Directives that were served by the EDTEA as indicated in table 1 above.

2.2 National Department of Health (“DOH”):

The National Department of Health (NDoH) administers and regulates the legal provisions under the Hazardous Substances Act, 1973 (Act No.15 of 1973) and Regulations (R452 and R453 of 25 March 1977) (“HSA”). The Act provides for the control of substances which may cause injury or ill-health or death of human beings by means of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products; for the division of such substances or products into groups in relation to the degree of danger; for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products; and for matters connected therewith.

There are four (4) groups of hazardous substances under the HSA. The Directorate: Environmental Health at NDoH regulates Groups I & II while the Radiation Control Unit under the South African Health Products Regulatory Authority (SAHPRA) regulates Groups III & IV. The Group I hazardous substances are divided into Category A (industrial chemicals) and Category B (active ingredients/pesticides).

A section 4 license is required in terms of the Act which is valid for one (1) calendar year from January 1 to December 31. This license is generally issued by the Director General for Health but has been delegated to the Chief Director: Environmental Health and Port Health Services in terms of section 26 of the Act.

The NDoH does not have the capacity or resources to implement the provisions of the Act and its Regulations. Therefore, the NDoH authorised in terms of section 8(1)(a) and (2) of the Act, Environmental Health Practitioners (EHPs) as inspectors, at the Provincial Departments of Health to execute the control of hazardous substances.

¹⁰ Section 151(2) of the NWA.

A Guideline was developed and approved in 2017 for Licensing of Group I Hazardous Substances in South Africa including the procedure for the handling and processing of license applications, the application form, an evaluation tool as well as the license form.

Prior to the Fire incident

A completed license application form was received from UPL by the Provincial Department of Health (PDoH) on the 24th of March 2021 in order to obtain a license for Category A and B hazardous substances. On this day, a physical inspection was conducted by the EHP from the PDoH utilising the evaluation tool contained in the Guidelines mentioned above. The evaluation tool is based on requirements as stipulated in GNR453 of 25 March 1977 as well as additional control measures. These requirements include the storage, conditions of sale or supply of Group I hazardous substances, records to be kept, labelling of hazardous substances, disposal of empty containers and management practice. On the 6th of April 2021, a formal communiqué was forwarded to NDoH recommending the issuance of a section 4 license since UPL was found to be in compliance with the Hazardous Substances Act, 1973 (Act No. 15 of 1973). In this regard, a section 4 license was issued on 8 June 2021 by the NDoH. In terms of section 3(1) of the Hazardous Substances Act, no person may sell any Group I Hazardous Substances without a licence. Whether UPL commenced the sale of any such substances before it was the holder of a licence, requires further investigation.

In the event that UPL had not applied for a section 4 license under the HSA then it would have contravened the provisions of regulations, GNR 453 of 25 March 1977. In such instances, the person may be found guilty of an offence and liable on conviction to a fine. The fine shall not exceed R500, which may be adjusted according to the Adjustment of fines Act. The respective laws however do not provide for a term of imprisonment. The NDoH would not generally institute a criminal investigation because the inspector authorised or appointed under section 8 of the Act with the powers vested in terms of section 9, demand (by means of an appropriate administrative notice) any information regarding such operation or process from the owner or person in charge of such premises or from any person carrying out or in charge of the carrying out of such operation or process.

After the fire incident:

The HSA makes provision for the suspension and cancellation of the license in terms of section 7. The reasons for such suspension and cancellation shall include the following:

- a. The person in connection with an application for a licence or renewal of a licence furnished the Director-General with any information which to the knowledge of such holder is untrue or misleading in any material respect;

- b. Has contravened or failed to comply with a condition subject to which the licence was issued;
- c. Has contravened or failed to comply with a provision the Act;
- d. Has at any time been convicted of any offence which is of such a nature that in the opinion of the Director-General it renders him unsuitable or if such person is for any other reason in the opinion of the Director-General not a suitable person to carry on the activities authorized by the licence, or to be involved in such activities; or
- e. Has ceased to carry on the activities authorised by the licence.

The licence held by UPL should be scrutinised for any conditions or provisions relating to clean-up or remediation of the environment on cancellation of a licence.

In the event of the above circumstances, the Director-General may by way of a notice in writing call upon the person to show cause, within the period specified in the notice, which period shall not be less than 20 days as from the date of the notice, why the licence in question should not be suspended or cancelled.

2.3 KwaZulu-Natal Nature Conservation Board and Service (Ezemvelo KZN Wildlife)

Ezemvelo KZN Wildlife (“Ezemvelo”) is the biodiversity conservation authority for the province of KwaZulu-Natal. Ezemvelo’s establishment and mandate are derived from the KwaZulu-Natal Nature Conservation Management Act 9 of 1997, the National Environmental Management: Biodiversity Act 10 of 2004 (“NEMBA”), the National Environmental Management: Protected Areas Act 57 of 2003 (“NEMPAA”) as well as the Nature Conservation Ordinance 15 of 1974 (“Ordinance”).¹¹

Ezemvelo is the management authority of the Umhlanga Lagoon Nature Reserve, located north of the town of Umhlanga. This Reserve was proclaimed in 1980¹² and again in 1986¹³ to include a portion of the oHlanga river into the Umhlanga Lagoon Nature Reserve.¹⁴ The uMhlanga Lagoon Nature Reserve was heavily impacted by the incident. The field rangers made the initial observations of pollution on the 15th of July 2021,

¹¹ Adjustment of Fines Act 101 of 1991 shall apply to Ordinance penalties.

¹² Proclamation notice 74 of 1980.

¹³ Proclamation notice 58 of 1986.

¹⁴ Section 12 of NEMPAA prescribes that protected area set in place prior to the commencement of this Act shall be considered a protected area in terms of this Act. Hence the provisions of NEMPAA apply to the Umhlanga Lagoon Nature Reserve.

which essentially was the trigger to institute further investigations into a suspected source upstream of the Ohlanga River.

The location of the UPL premises and the Umhlanga Lagoon Nature Reserve are in a critical biodiversity area comprised of, in part, the lagoon and estuary, riparian vegetation and the coastal forest.

Reeds and sedges comprise the largest proportion of estuarine habitat, followed by open water and sand/mudbanks. The reeds and sedges provide important refuge areas for juvenile marine and freshwater fish using this system as a nursery and provide nesting habitats. The sand and mudbanks are critically important for the sand prawn and for roosting birds and waders that use this habitat for resting and feeding. A total of 638 bird species (including vulnerable, endangered and critically endangered) have been recorded for the lagoon and surrounding areas, with approximately 80 bird species that may be directly impacted upon by the chemical spill. This number is likely to increase as a consequence of the clearing operations, remedial and rehabilitation that will be required. The system is home to, and the breeding grounds for, a host of amphibian and reptilian species. The estuary and the drainage lines entering this waterbody form the key, if not the only, source of fresh water for wildlife.

Prior to the fire incident:

Ezemvelo confirmed that, prior to the establishment and/or operations at UPL, it had not received and was not aware of any applications made by UPL to operate at that particular location.

After the fire incident:

Notwithstanding the impacts on the Umhlanga Lagoon Nature Reserve, certain prohibitions are contained in regulations issued in terms of NEMPAA. Furthermore, any harm inflicted on certain listed species would be regulated by either or both the NEMBA and the Ordinance.

In the sections that follow, it should be noted that the legislation may not apply to activities that occurred accidentally or negligently, whereas others may apply only if they were undertaken within a protected area.

Clarification of the legal position is required, as preliminary enquiries indicate that this legislation may not be applicable to the incident and the events that followed.

The Regulations issued in terms of **NEMPAA** for the proper administration of nature reserves¹⁵ prohibit any conduct that may intentionally or negligently cause pollution¹⁶ and identify actions¹⁷ that are not undertaken in the absence of written authorisation from a management authority. Any person who is convicted of an offence described herein is liable, in the case of a first conviction, to a fine not exceeding R10 million or imprisonment for a period not exceeding five years and, in the case of a second or subsequent conviction, to a fine not exceeding R10 million or imprisonment for a period not exceeding ten years or in both instances to both a fine and such imprisonment.

In terms of **NEMBA**, a person is guilty of an offence if that person contravenes or fails to comply with a provision regarding listed threatened or protected species. Here, the Minister may, by Notice in the Gazette and subject to such conditions as the Minister may specify in the Notice, prohibit the carrying out of any activity—

- a) which is of a nature that may negatively impact the survival of a listed threatened or protected species; and
- b) which is specified in the Notice,

or prohibit the carrying out such activity without a permit issued in terms of this Act (NEMBA).¹⁸

The list of threatened or protected species (i.e. the Notice referred to in point 'b' above) is provided in the Threatened or Protected Species Regulations.¹⁹

Any person convicted of an offence for contravening the above is liable to a fine not exceeding R10 million, or imprisonment for a period not exceeding ten years, or to both such a fine and such imprisonment.

In terms of the **provincial Ordinance**:

It should be noted that the Ordinance (outdated, old order legislation) deals with the protection of wildlife (fauna and flora) through listing, licences and permits. It deals with deliberate conduct of people. It is doubtful

¹⁵ GNR 99 dated the 8th of February 2012.

¹⁶ Regulation 33(3)(a); 33(5) and 51(c) and 51(h) of the NEMPAA.

¹⁷ Section 33(1)(g); (h); (j); 33(3)(c) of the NEMPAA.

¹⁸ Section 101(1) of NEMBA.

¹⁹ Published in Gazette No. 29657, Notice No. R. 152 of the 23rd of February 2007 (as amended).

that the Ordinance applies in cases where pollution, that has its source far from the place where fauna or flora were killed, damaged or destroyed, is the cause.

The Ordinance provides:

- a) No person shall kill or capture any protected indigenous amphibian, invertebrate or reptile,²⁰ save in accordance with a permit.²¹ Any person who contravenes this provision shall be guilty of an offence and liable on conviction to a fine not exceeding five hundred Rand (R500) or, in default of payment, to imprisonment for a term not exceeding six months or to both such fine and imprisonment.²²
- b) No person shall at any time kill any wild bird without a permit.²³ Any person who kills a specially protected bird²⁴ without a permit shall be guilty of an offence and liable on conviction to a fine not exceeding one thousand Rand (R1 000) or, in default of payment, to imprisonment for any term not exceeding twelve months or to both such fine and imprisonment.²⁵ Furthermore, no person shall kill any wild bird using poison²⁶ and any person who kills any wild bird (other than a specially protected bird) shall be guilty of an offence and liable on conviction to a fine not exceeding five hundred Rand (R500) or, in default of payment, to imprisonment for any term not exceeding six months or to both such fine and imprisonment.
- c) Any contravention of this provision, that person shall be guilty of an offence and shall be liable on conviction to a fine not exceeding two hundred and fifty Rand (R250) or, in default of payment, to imprisonment for any term not exceeding three months or to both such fine and imprisonment.²⁷
- d) Any person who injures or destroys fish in any waters using any poisonous substance shall be guilty of an offence.²⁸ Any person who contravenes this provision shall be liable to a fine not exceeding five hundred Rand (R500) or in default of payment, to imprisonment for any term not exceeding six months, or to both such fine and imprisonment.²⁹
- e) No person shall deposit or discharge or allow to enter or percolate into any waters, any substance, matter or thing, whether solid, liquid or gaseous, which is injurious or is liable to become injurious to

²⁰ Schedule 7.

²¹ Section 101 of the Ordinance.

²² Section 109(1)(a).

²³ Section 114.

²⁴ Schedule 9.

²⁵ Section 130(1)(a).

²⁶ Section 127.

²⁷ Section 130(1)(c).

²⁸ Section 151(e).

²⁹ Section 154(1)(b).

fish, to the extent to which it may be permitted in terms of the Water Act 54 of 1956.³⁰ Any person who contravenes this provision shall be liable to a fine not exceeding one thousand Rand (R1 000) or, in default of payment, to imprisonment for any term not exceeding twelve months or to both such fine and imprisonment.³¹

- f) In terms of marine life, no person shall kill or destroy any fish, other than sharks, by means of poison.³² Any person that contravenes this provision shall on conviction be liable to a fine not exceeding one thousand Rand (R1 000) or imprisonment for a period not exceeding one year or to both such fine and imprisonment.³³
- g) In terms of marine waters, no person shall deposit or discharge or allow to enter or percolate into any waters any substance, matter or thing, whether solid, liquid or gaseous, which is injurious or is liable to become injurious to fish to the extent to which it may be permitted in terms of the Water Act, 1956 54 of 1956.³⁴ Any person that contravenes this provision shall on conviction be liable to a fine not exceeding one thousand Rand (R1 000) or imprisonment for a period not exceeding one year or to both such fine and imprisonment.³⁵

Furthermore, it is unlawful for any person within a protected area to kill, injure, capture, or disturb any animal or take or destroy any egg, larva, or nest.³⁶ Any person who contravenes the provisions of the Ordinance by wilfully or negligently killing or injuring any specially protected game³⁷ within nature reserve shall be guilty of an offence and be liable on conviction to a fine not exceeding ten thousand Rand (R10 000) or imprisonment for a period not exceeding two years or to both such fine and such imprisonment.³⁸ Wilfully or negligently killing or injuring any ordinary³⁹ or protected game⁴⁰ within a nature reserve shall be guilty of

³⁰ Section 151(e).

³¹ Section 154(1)(a).

³² Section 161.

³³ Section 185(1)(a).

³⁴ Section 183.

³⁵ Section 185(1)(a).

³⁶ Section 15(1)(c) of the Ordinance.

³⁷ Schedule 3.

³⁸ Section 23(1).

³⁹ Schedule 1.

⁴⁰ Schedule 2.

an offence and be liable on conviction to a fine not exceeding five thousand Rand (R5 000) or imprisonment for a period not exceeding one year or to both the fine and imprisonment.⁴¹

In practice, a criminal investigation will be initiated if a person is found to be undertaking or causing activities within a nature reserve that cause environmental damage

It is reasonable to conclude at this early stage that both the biodiversity and protected area have been substantially impacted upon, the extent of which remains to be determined. Both NEMBA and NEMPAA,⁴² in accordance with the environmental right in the Bill of Rights in the Constitution,⁴³ provide for biodiversity and the protected areas to be held in trust (protected) for the benefit and enjoyment of current and future generations. Therefore, following the principle of the public trust doctrine, those accountable for the chemical spillage and the consequent removal of the chemicals and contaminated environment, together with any other impacts that may arise from this process and the mitigation actions taken, must make good on (i.e. compensate and/or offset) the residual damage caused to both biodiversity and the protected area. In referring to the damage, cognisance must be taken of *in situ* damage and the damage that may accrue in time and spatially (i.e. education of breeding success and fecundancy, damage caused to migratory species, indirect and trophic poisoning, etc.).

Furthermore, cognisance must be taken of the opportunity cost. Here reference is made to the Umhlanga estuary and the Umhlanga Lagoon Nature Reserve being a key tourism and birding destination. As part of further investigations into the damage caused, an assessment of the extent of the damage to biodiversity, the protected area, and visitor enjoyment of the area needs to be investigated and quantified. Given the importance and sensitivity of the area, Ezemvelo, in consultation with its partners, will determine the point in time when the impacts (including those that arise from remediation) of the chemical spill would constitute residual damage. The compensation for and offsetting of the residual impacts on the natural environment will be based on the extent and severity of the damage remaining at that time.

These issues are relevant to the quantification of the damage caused by the incident and should form part of the environmental assessments that have been compelled under NEMA.

⁴¹ Section 23(2).

⁴² Section 3 of both NEMPAA and NEMBA.

⁴³ Constitution of the Republic of South Africa 1996.

2.4 KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (“EDTEA”), supported by the Department of Forestry, Fisheries and the Environment

In order to achieve sustainable development within the KZN Province, the EDTEA as the lead entity administers and regulates amongst others, the 2014⁴⁴ Environmental Impact Assessment (“EIA”) Regulations which were promulgated in terms of the National Environmental Management Act, Act 107 of 1998 (“NEMA”) and is recognised as a Competent Authority in terms of NEMA. The 2014 EIA Regulations list specific activities which may not commence in the absence of an Environmental Authorisation (“EA”).

Prior to the fire incident:

On the 13th of October 2015, the EDTEA issued the EThekweni Metropolitan Municipality and Tongaat Hulett an EA for the construction of Cornubia Mixed Use Phase Development – Phase 2 which is located on various portions within the EThekweni Metropolitan Municipality. The EA describes both these entities as the authorisation holders and under paragraph 3 thereof subjects the EA to a list of conditions (EA reference no. DM/0030/2012).

The EA further indicates a number of EIA activities which are authorised, including Activity 14 of GNR 983 the applicability of which will be discussed in further detail below. The ambit of this particular activity however only relates to the respective phase of the development and the specific wording in the EA is set out below:

“the project may involve the storage of dangerous goods above these thresholds during the construction and/ or operational phase, particularly at Bus Depots.”⁴⁵

The EA further limits the application and scope by inserting a condition which specifically requires private facilities to undertake a separate EIA application should they require they require the storage and handling of dangerous goods that exceeds 80m³.

⁴⁴ GNR 983, GNR 984 and GNR 985 of 2014.

⁴⁵ Page 9 of the EA.

An extract of the EA to the extent that it relates to Condition 3.29⁴⁶ of the EA is as follows:

3.29 The following conditions apply to private⁵ facilities:

3.29.1 Private facilities that require the storage and handling of dangerous goods that exceeds 80m³ in capacity are subject to a separate EIA application prior to the construction and installation of such infrastructure. This must be included in the purchase and sales or lease documentation.

⁵ Private facilities refer to the industrial and commercial/mixed use development. These are the developers that will purchase or lease the platforms and construct the top structures which have not been approved by this EA. Private facilities must determine the legal requirements prior to the time of storage.

The EDTEA has reason to believe that UPL has undertaken the following activities listed or specified in terms of Section 24(2)(a) and (b) of the NEMA:

Activity 14 of Listing Notice 1 (GNR 327 in GG 40772 published on the 7th April 2017): "The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres".

alternatively

Activity 4 of Listing Notice 2 (GNR 325 in GG 40772 published on the 7th April 2017): "The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metre".

The EDTEA considers that UPL undertook the above-mentioned activities at the warehouse in Cornubia. Development, in the context of the relevant Regulations, includes *inter alia* the "establishment" of facilities for the storage and handling of dangerous goods.

Based on information made available to the authorities the goods that were stored, or stored and handled, at the facility were goods containing substances listed in South African National Standard No. 10234, supplement 2008 1.00: designated "List of classification and labelling of chemicals in accordance with the Globally Harmonized Systems (GHS)" published by Standards South Africa.

⁴⁶ Page 16 of the EA.

While the exact quantities of each of the dangerous goods stored at the facility at the time of the fire incident has not yet been fully quantified and verified, the EDTEA has reason to believe, based on the information provided to date, that the quantity of dangerous goods stored at the facility exceeded the minimum thresholds provided for in the Listing Notices. Evidence of the quantity of dangerous goods will need to be obtained through further investigation processes.

Section 24F(1)(a) of NEMA provides that no person may commence with an activity listed or specified in terms of section 24(2)(a) or (b) of NEMA unless the competent authority has granted an EA for the activity. Failure to comply with this provision is an offence⁴⁷ in terms of section 49A(1)(a) of NEMA and the urgent initiation of a criminal investigation is critical at this stage.

After the fire incident:

The NEMA criminalises the behaviour of an individual or company in the event that such a person unlawfully and intentionally or negligently commits an act or omission⁴⁸ which causes significant pollution or degradation of the environment or is likely to cause significant pollution or degradation of the environment or which detrimentally⁴⁹ affects or is likely to detrimentally affect the environment. The question then arises: did UPL, as a result of its failure to comply with specific legal requirements (either in term of NEMA or other relevant legislation), act negligently by creating a point source of pollution which resulted in the environmental impacts, despite the fact that the fire was started by other individuals? Aspects related to this question should form part of the criminal investigation which will also determine:

- whether criminal liability on the part of UPL arises where pollution occurred (in water resources, land, the marine environment and protected areas), not as the direct actions of UPL, but were the consequences of measures taken to douse the fire that destroyed its warehouse, and to prevent the spread of pollution, by UPL, the authorities and contractors;
- whether the acts or omissions of UPL by not undertaking mandatory risk assessments in respect of the chemicals it stored, or risk assessments where it would be prudent to do so, given the inherent dangers associated with the storage, handling or use of such chemicals or substances,

⁴⁷ Section 49A(1)(a) provides that is an offence if a person commences with an activity in contravention of section 24F(1) of the NEMA. Upon conviction section 49B provides that such a person is liable to a fine not exceeding R10 million or to imprisonment for a period not exceeding 10 years, or to both such fine or such imprisonment.

⁴⁸ Section 49A(1)(e) of the NEMA.

⁴⁹ Section 49(1)(f) of the NEMA.

may be construed as negligence, gross negligence or recklessness, giving rise to criminal or civil liability for the harm caused to the environment and human health;

- whether the failure to obtain permits, licenses or authorisations to store hazardous materials (or dangerous goods as defined in relevant legislation) may be considered to be negligence, gross negligence or recklessness in itself, giving rise to liability caused by the pollution event;
- whether the conduct of UPL in either of the foregoing circumstances constitutes the necessary criminal intent in the form of *dolus eventualis* to found criminal action against UPL.

The unrest event should not be conflated with the consequences of the fire that occurred. The following factors must be considered:

- the unrest event did not cause the pollution, but may have hampered the actions necessary to bring the ensuing fire under control;
- the fire caused widespread air pollution and damage to property in its immediate vicinity, but it was firefighting water that caused land, water and marine pollution, with associated harm to protected areas and biodiversity;

The event demonstrated that a fire in the UPL premises from any cause (which must have been foreseeable, whether caused accidentally or by sabotage) was likely to cause a serious pollution event. Is it fair to assert that had UPL:

- applied for the mandatory permits, licences and authorisations, the risks associated with a possible fire or other event, would have been assessed and guarded against; or
- conducted risk assessments and put in place appropriate controls (it is not known what controls were in place), the spread of pollutants from the warehouse could have been prevented or minimised,

which omissions gave rise to the pollution that occurred, and therefore attract criminal liability under the relevant legislation detailed in the Report?

These questions require further consideration and clarification and may only be decided upon during criminal and / or civil proceedings.

2.5 EThekweni Metropolitan Municipality (“EThekweni”)

The Cornubia development falls within the jurisdictional area of EThekweni. EThekweni is responsible for providing essential services within this area, including the administration of the planning and land use laws as well as the immediate disaster management responses when activities which may result in damage to the environment, property and/or human life are detected.

The involvement of the various units within EThekweni are described below as this provides additional clarity around the different regulatory environments.

Prior to the fire incident:

2.5.1 Development Planning, Environment and Management Unit

Buildings Plans, Zoning and Certificates of Occupation:

In order to lawfully construct a warehouse, clearance of a building plan is required. This is considered in conjunction with Special Zone 19 zoning which allows a warehouse as a free entry, primary use right as per facilitation table within the zone.

SPECIAL ZONE 19: CORNUBIA			
PAGE 4 OF 12			
PRECINCT TWO: N2 BUSINESS ESTATE			
PRIMARY	SPECIAL CONSENT	PRECLUDED	
<ul style="list-style-type: none"> • Action Sports Bar • Arts and Crafts Workshop • Betting Depot • Builders Yard • Car Wash • Convention Centre • Creche • Educational Establishment • Display Area • Flea Market • Fuelling and Service Station • Garden Nursery • Government / Municipal • Health & Beauty Clinic • Health Studio • Industry - Light • Laundry • Motor Display Area • Motor Workshop • Museum • Office • Office – Medical • Parkade • Pet Grooming Parlour • Private Open Space • Public Open Space • Restaurant / Fast Food Outlet • Shop • Veterinary Clinic • Warehouse 	<ul style="list-style-type: none"> • Adult Premises • Telecommunications Infrastructure • Direct Access Service Centre • Funeral Parlour • Institution • Motor Garage • Motor Vehicle Test Centre • Night Club • Place of Public Entertainment • Place of Public of Worship • Special Building • Truck Stop 	<ul style="list-style-type: none"> • Agricultural Activity • Agricultural Land • Airport • Boarding House • Cemetery / Crematorium • Chalet Development • Container Depot • Correctional Facility • Dwelling House • Escort Agency • Flat • Hotel • Industry - Extractive • Industry – General • Industry – Noxious 	<ul style="list-style-type: none"> • Industry – Noxious • Landfill • Mobile Home Park & Camping Ground • Mortuary • Multiple Unit Development • Nature Reserve • Recycling Centre • Reform School • Refuse Disposal • Retirement Centre • Riding Stables • Scrap Yard • Transport Depot • Transport Use • Zoological Garden

Building Plan Approval:

The relevant Zoning and Precinct Plan was in place which allowed for this. Free entry means they have the right to have a warehouse, and therefore special consent is not required; however, it is still a requirement for building plans to be approved as provided for by the respective National Building Regulations.

The following issues require clarification:

- Is the storage of hazardous materials for use in agriculture not the precluded "Agricultural activity" of Agricultural land in the light of the definitions in the scheme "allied products" in the first, and "any buildings connected therewith". or "Industry" in its various forms, in the second. The proposed use of a warehouse is generally disclosed in the planning application and on investigation during the planning approval process, should at least have provoked an enquiry under sections 6 and 7 of the National Building Regulations and Building Standards Act. The chief fire officer should have reported on the fire risks associated with the goods to be stored, as required by s6(2).

The contents stored within the warehouse does not form part of any building plan submission. At the point of submission of the plans, it was purely for a warehouse. UPL as the tenant of the warehouse took place after the building plans were approved and UPL only occupied a section of the warehouse. In this regard, it is not a regulatory requirement for EThekwini to involve itself in tenant lease agreements. The building plans were approved for a Warehouse, after receiving clearance from all the affected internal departments within the EThekwini (Fire & Emergency, Metro Waste-Water Management, Metro Water, Roads & Storm-water Maintenance and Environmental Health) on the 21st January 2019. A beneficial occupation was issued on the 22nd January 2021 and reissued for the entire building on the 15th of May 2021. It is furthermore important to note that the building plans were supported by the design review panel. The only outstanding item was the approval of the amendment plans.

Deviations' plans (under plan no.: 21040045) were re-submitted to EThekwini and the plan was refused on the 23rd of June 2021. A refusal notice was issued by the Development Application and Approvals Branch for a "response which was outstanding from Pollution Control Department". At the time of the fire incident this response was not submitted for approval.

The reasons for the refusal of the amendment to the building plans require investigation and disclosure.

The Beneficial Occupation that was granted remained valid to the point at which the fire incident occurred, but it is important to note that it was granted in respect of the entire building and not for the occupation of the warehouse by two different tenants. Having noted that the building was occupied by two tenants, the reasonable inference drawn was that the tenants and/or the lessor undertook unauthorised work which eThekwini was unaware of. If eThekwini had been aware of this, contravention notices for “unauthorised building works” and “unauthorised occupation” would have been issued.

It is important to therefore note that UPL (the tenants) required a separate certificate of occupancy for the internal layout. At the time of the incident the EThekwini was not aware that the building was already occupied.

Activity:

At first blush, the storage of chemicals may fall within the definition of a “warehouse” which is permitted. A precluded use as stipulated in the Special Zone 19: Cornubia table is “Industry Noxious”. The use is defined as “*Industry-Noxious: means any industry or trade that by reason of fumes, gases, vapours, dust, smell, noise, vibration, or other causes, is deemed by the Municipality to be likely to become dangerous or harmful to the health, welfare, and amenity of the general public”.*

This precluded use may become relevant to eThekwini’s further investigation. This definition includes a trade (wider than industry) and if the activity conducted by UPL falls within the definition, it no longer is a warehouse activity but an Industry-Noxious activity.

UPL hand the duty to know or make enquiry as to whether its storage of hazardous substances was permitted by the zoning. While this is a serious omission in its own right, it demonstrates a general disregard for the need for compliance with relevant legislation. It reveals a pattern of which could be interpreted as general lack of willingness to comply with the law. Read with its failure to obtain EA for the storage of goods, supports the notion that this conduct is the underlying cause for the serious pollution that followed the fire in the warehouse. The cause of the fire is irrelevant to this part of the enquiry.

At a factual level, eThekwini is uncertain whether the chemicals were manufactured, mixed or decanted on site. Further investigations must be conducted in this regard, to determine if the on-site activity conducted by UPL may fall within the precluded use.

Administrative Enforcement Notices:

The owner (Fortress Income 8 (Pty) Ltd, presumably a subsidiary of Fortress REIT), was issued with 3 notices following the fire incident, namely:

- Unauthorised Occupation,
- Dangerous Situation; and

- Deviation Notice for Internal tenant layout.

The contravention notice was issued on 13th of August 2021 stating that occupation be discontinued. This was when it was brought to the attention of eThekweni officials that unauthorised works had taken place. Since the fire damage and the building not being unoccupied, eThekweni is unable to take any enforcement action.

2.5.2 Environmental Planning and Climate Protection Department (EPCPD): General environmental management advice and support

The primary focus of the EPCPD is the strategic protection of the eThekweni Municipality's biodiversity assets through, for example, commenting on development planning in relation to environmentally sensitive land and being the strategic generator and custodian of the Durban Metropolitan Open Space System (D'MOSS). As part of the area affected by the fire incident is covered by D'MOSS the wellbeing of the area is of direct interest to this department. The EPCPD also delivers an advisory and oversight function, ensuring that line functions are compliant with all relevant environmental legislation and best practices in relation to Municipal projects and infrastructural work. The Cornubia Precinct infrastructural development was one such a project.

The eThekweni Municipality-Human Settlements Unit (along with the Tongaat Hulett Development Group) were the original applicants and recipients of the phase one and two EA's, issued by the provincial authority. The EPCPD assessed respective EIA applications, made comments thereon to ensure the best possible safeguards were put in place to protect the biodiversity and hydrology of the properties and monitored the environmental aspects attached to the original infrastructural work conducted on the Cornubia Precinct.

The EPCPD participated by giving input prior to and during the environmental impact assessment, which resulted to EDTEA issuing an EA (reference no. DM/0030/2012 on the 13th of October 2015) and containing clause 3.29.1 which expressly requires that: *Private facilities that require the storage and handling of dangerous goods that exceeds 80 cubic meters in capacity are subject to a separate EIA application prior to the construction and instillation of such infrastructure.* It was required in the EA that this clause *be included in the sales or lease documentation.*

2.5.3 The Health Unit:

Schedule Activities Permit

Prior to commencement of a listed activity UPL failed to make an application for a Scheduled Activities Permit in terms of Section 5.1 of the 2019 Scheduled Activities By-law as set out below:

5.(1) No person may –

- (a) commence, carry on, or cause or permit to be commenced with or carried on in any premises; or
- (b) erect, extend or add to any building, plant or works used, or for the purpose of using them, in connection with, any one or more of the scheduled activities listed in Schedule 1 to this By-law, without the written permission of the Municipality.

Action to be taken in case of non-compliance with the scheduled Activities Bylaw is described in Section 9 as set out below.

9. (1) The Municipality may issue a compliance notice in the prescribed form if it has reasonable grounds to believe that a person has not complied—

- (a) with a provision of this By-law; or
- (b) with a condition of the permit issued in terms of this By-law.

.....

(5)

- (b) in the case of a person who has not been issued with a permit-
 - (i) apply for an order of court to close down any activity or process which constitutes a scheduled activity in terms of this By-law; and
 - (ii) cause the responsible person to be prosecuted for an offence in terms of this By-law.

As an immediate response to this situation EThekwini issued a consolidated notice which instructed UPL to do the following:

- Submit a Section 30 incident report;
- Containment of the contaminated water;
- Removal of the waste to an accredited disposal facility;
- Appointment of an Air Quality Specialists (sampling and modelling) and HHRA Specialists, Ecological and geohydrological specialists and submission of reports as air quality is a municipal competence.

The failure on the part of UPL to be in possession of the required Scheduled Activities Permit can also be taken up in the criminal investigation, given that failure to be in possession of such constitutes a criminal offence in terms of the By-law.

2.5.4 Fire & Emergency Services (FES)

Fire By-laws

The National Building Regulation SANS 10400 Part T, SANS 10263 (Warehousing of Dangerous goods) and Fire Bylaws Relating to Flammable Liquids & Substances are regulated by the Fire and Emergency Services of eThekweni. The building plan for a proposed subdivision of the warehouse into two tenants and proposed flammable liquids store was recommended for approval by FES; however, approval for occupation would be supported only after the subdivision was constructed and compliant with fire requirements before the business could be operated.

eThekweni is further investigating whether the activity conducted by UPL falls within the “Industry Noxious” definition which may impose further obligations on the tenant and/ or owner of the property.

After the fire

2.5.5 Potential contravention of Municipal By-Laws:

eThekweni regulates conduct in its Municipal jurisdiction by passing and enforcing By-Laws. eThekweni is considering the UPL incident and the environmental fallout, extracted from the toxicology reports, against its By-Laws which *inter alia* include:

- (i) Air Quality Management By-Law 2018;
- (ii) Coastal Management By-Law 2017;
- (iii) Interim Code relating to the Prevention of Flammable Liquids and Substances No 27 of 2000;
- (iv) Sewage Disposal By-Law 2018;
- (v) Scheduled Activity By-Law 2019;
- (vi) Beach By-Law 2015;
- (vii) Waste Removal By-Law 2016.

2.6 National Department of Agriculture, Land Reform and Rural Development (DALRRD)

The DALRRD regulates the manufacturing, distribution, importation, sale, use and advertisement of fertilizers, animal feeds, pesticides, stock remedies (agrochemicals products) as well as the operation of sterilizing plants and pest control operators in terms of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947).

The responsibility of the DALRRD relative to this investigation involves the following:

- Evaluating and registering agrochemical products for use in South Africa, having satisfied itself that such products are efficacious, and safe for humans, animals, crops and the environment; and,
- Monitoring compliance with the legislation.

Following the incident, DALRRD was requested to confirm the registration status of products being stored in the warehouse. To this extent the DALRRD provided a preliminary report in relation to the registration status of the products.

Table 2 - Status of the investigation by the Department of Agriculture (as at date of report):

List of products	Number of product
Validated Products	373
Products which do not require validation from Agriculture	202
Products with an unknown classification	94
Product classification which requires further investigation	45
Products in store destined for re-export (Zambia)	4
Products in store destined for re-export (Mozambique)	1
Products in store destined for re-export (Malawi)	1
Labelling products	836
Packaging Products	127

Further verification is being undertaken and the registration status of the products is being checked with the office of the Registrar as this may constitute a contravention of section of Act 36 of 1947 since this particular section prohibits the sale⁵⁰ of products which are not registered within the Republic of South Africa.

In addition to the above, the following needs to be investigated:

- Whether any agricultural remedies which were phased out or unregistered were stored within the UPL warehouse;
- Whether or not unregistered products were imported and stored within the UPL warehouse as this may trigger the provisions of section 16 of the Act.

It should also be noted that licensing of facilities that sell, store and handle hazardous substances, including agrochemical products, is governed in terms of the Hazardous Substances Act, 1973 (Act No.15 of 1973) through the Department of Health (DoH). As described above, the DoH issued a licence to UPL which is referenced NDoH-KZNP 87/2021 and dated the 08th of June 2021.

2.7 National Department of Employment and Labour

The National Department of Employment and Labour administers the Occupational Health and Safety Act, 1993 (“OHSA”). A Major Hazard Installation (“MHI”) is defined in section 1 of the OHSA as “*an installation:*

- where more than the prescribed quantity of any substance is or may be kept, whether permanently or temporarily; or,*
- where any substance is produced, processed, used, handled or stored in such a form and quantity that it has the potential to cause a major incident.”*

In relation to part (a) the exceedance of a prescribed quantity of a substance is required for the installation/facility to fall within the definition of MHI; however, in relation to (b) an installation/facility would fall within the definition of an MHI based on the potential (given the nature and quantity of substances stored and handled) to cause a major incident. Considering the volumes and nature of the chemicals stored at the UPL warehouse at this particular location (see list referred to in the abovementioned section), it is reasonable to conclude, based on the information at the disposal of the investigative team, that the facility fell within the definition of a MHI and was subject to the legal requirements for such installations.

⁵⁰ **Definition “sell”** includes agree to sell, or to offer, advertise, keep, expose, transmit, convey, deliver or manufacture for sale or to exchange or to dispose of to any person in any manner for any consideration whatever, or to transmit, convey or deliver in pursuance of a sale, exchange or disposal as aforesaid; and ‘**sale**’ has a corresponding meaning)

In terms of section 43(1)(c) of the OHS Act the Minister is empowered to make regulations as to the preventive and protective measures for major hazard installations with a view to the protection of employees and the public against the risk of major incidents. The Major Hazard Installation Regulations were published in GNR 692 on 30 July 2001 (“MHI Regulations”) apply to employers who have on their premises, either permanently or temporarily, a major hazard installation or a quantity of substance that may pose a risk that could affect the health and safety of employees or the public.

In terms of the MHI Regulations, there is a duty to notify the chief inspector, provincial director and relevant local government, in writing, of the erection of a MHI or the conversion of an existing installation into a MHI. A risk assessment is then required, which must be updated every five years and submitted to the authorities. The risk assessment confirms the status as a MHI and determines the level of risk and requirements to guard against these risks materialising. An on-site emergency plan is also required. This plan needs to be discussed with the local authority prior to being finalised and then it should be reviewed and updated every three years. If the plan is properly in place then the employer is, together with the relevant authority, responsible for the implementation of the plan.

In relation to the above and with the information currently at the disposal to the Department of Employment and Labour the following findings are made:

- UPL was required to undertake a risk assessment as provided for by the OHS Act;
- There was no application or request on record with the Department of Employment and Labour as well as the Local Authority as per the requirement of Section 5 of the MHI Regulations;
- In considering the risk assessment (if such had been done as required), the Health Official within the EThekweni⁵¹ would have been able to consider the risk posed to both employees on site and the community at large and would have ensured that the risk assessment adequately dealt with all risks identified, identified gaps and set out recommendations. In this instance, the EThekweni was not provided with the risk assessment; and,
- Within the ambit of the required risk assessment, an emergency plan would also have been required.

In terms of the MHI Regulations non-compliant behaviour is criminalised. To this extent the MHI Regulations provide that, upon conviction a person is liable to a fine or to imprisonment for a period of 12 months and, in the case of a continuous offence, to an additional fine of R200 or additional imprisonment for each day on which this continues, provided that the period of such additional imprisonment shall not exceed 90 days.

⁵¹ Section 5 of the MHI.

Additional considerations which require further investigations and which a further determination needs to be made are the following:

- Regulations for Hazardous Chemical Agents published in GNR 280 on 29 March 2021 (“Hazardous Chemical Regulations”). These may however only be relevant under the particular circumstances in respect of the duty to keep safety data sheets and the obligations relate more to those obligations focused on employer/employee and in respect of packaging, labelling and disposal.
- SANS and SANAS requirements such as SANAS TR54 and SANAS technical requirements for the application of ISO/IEC 17020 in the regulatory assessment of MHI inspection bodies, SANAS F147 terms and conditions, SANS 1461 MHI: Risk Assessments and SANS 1541 MHI: Emergency response planning.

As a result of all of the above, it is the view of the Department of Employment and Labour (based on the information currently available) that the above regulatory requirements were not met and may even have contributed to the severe damage that was observed, since the emergency response plan, in particular, could not be activated. These aspects will therefore be taken up in the criminal investigation.

3. Summary of Key Findings

Considering all the above, the following summarise the key findings:

Before the fire incident:

- UPL established its operations within the warehouse located in Cornubia, KZN, unlawfully **prior to** the unrest situation which occurred during the period 12 – 16 July 2021. In this regard, **and with the information currently at the disposal of the investigative team** the following should be noted:
 - The volumes of chemicals stored in the warehouse was significant, exceeding a volume of 500 cubic metres, therefore constituting a “Listed Activity” identified in terms of section 24(2)(a) of NEMA in Government Notice R984 in *Government Gazette* 38282 of 4 December 2014 and amended by Government Notices 325 of 7 April 2017 and 517 of 11 June 2021, an activity that may not commence without environmental authorisation (EA);
 - An Environmental Authorisation (EA) in terms of the NEMA would have been required **prior to** the storage operations commencing. It would have been necessary to follow an environmental impact assessment process and to submit all relevant documents and reports to the competent authority

to enable it to make a decision on whether or not to issue an EA. This process would have, among other things, assessed the readiness of the facility to respond to an emergency situation. Furthermore, any EA issued would have been subject to a number of conditions aimed at mitigating risks identified;

- It is the view of the investigative team that UPL may not have undertaken the necessary assessment required in terms of the Occupational Health and Safety Act (OHSA) read with the Major Hazard Installation (MHI) Regulations. This risk assessment process would have determined whether or not this facility constituted an MHI as defined in the OHSA. However, and considering the volumes and nature of the chemicals stored at this particular location, it is reasonable to conclude (based on the information at the disposal of the investigative team) that the facility fell within the definition of a MHI and was subject to the legal requirements for such installations;
- A Scheduled Activities Permit (SAP) was not obtained by UPL from the eThekweni Metropolitan Municipality. This SAP would have taken into consideration the requirements of the risk assessment which was one of the steps to determine whether or not this facility would require MHI certification. The SAP would have also been subject to a number of conditions aimed at mitigating risks identified;
- The building plan for a proposed subdivision of the warehouse for use by two tenants and proposed flammable liquids store was recommended for approval by the eThekweni Fire Department; *however*, approval for occupation would only have been supported after the subdivision was constructed and was deemed compliant with fire requirements which was required before the business could be operated;
- The occupation of this warehouse by two different tenants was not authorised by eThekweni.

After the fire incident:

- The unlawful establishment and operation of the UPL facility created a point source of pollution in that particular location, close to a river system, a residential neighbourhood, a sensitive protected area and the coastal environment. Notwithstanding the catalyst which triggered the pollution event, it is appropriate to consider the significant damage which resulted **after** the fire incident, in particular as it relates to the following:
 - In addition to general aesthetic considerations of any area, the Umhlanga Lagoon Nature Reserve was afforded an additional layer of protection as set out in the National Environmental

Management: Protected Areas Act, National Environmental Management: Biodiversity Act and the KwaZulu-Natal Nature Conservation Ordinance 15 of 1974. This area is considered to be irreversibly damaged as a result of the pollution from this incident which may have resulted in an entire ecosystem service loss. The impact on ecotourism of, not only this reserve, but the whole of the town of Umhlanga was impacted and may be impacted for a considerable period of time. Contraventions of the legislation governing protected areas and biodiversity attract serious penalties.

- In addition to the above, the National Environmental Management Act as well as the National Water Act recognises that any unlawful and intentional or negligent conduct which results in serious pollution or degradation of the environment and a water resource is considered to constitute criminal conduct. Further investigation is required to determine whether UPL, as a result of its failure to comply with specific legal requirements (either in terms of NEMA or other relevant legislation), acted negligently by creating a point source of pollution which resulted in significant environmental impacts, despite the fact that the fire was started by other individuals.
- In addition to the acts or omissions giving rise to environmental degradation, the failure to obtain licences, permits or authorisations where these are required by law, constitute criminal offences under the relevant legislation.
- Had the relevant licences been applied for, the environmental assessment processes that would have been required, may have identified risks that could have been avoided, or could have been guarded against. The desirability of storing large quantities of agricultural chemicals in close proximity to people and sensitive environments would have been evaluated. Bypassing these processes, no doubt contributed to the seriousness of the pollution that resulted.

C. RECOMMENDATIONS

There are a number of considerations which need to be further investigated in order to arrive at a definitive conclusion in relation to this matter. It will therefore be necessary to proceed with caution considering that any information obtained / collected may need to be presented as evidence in a criminal court. For this reason, the following is recommended:

In relation to the “incident”

1. An independent team of investigators comprising of Environmental Management Inspectors from the DFFE and the EDTEA should urgently initiate a criminal investigation. This team will be led by DFFE. The team will work closely with those authorities which are mandated in terms of the other applicable legislation and regulatory requirements.
2. The criminal investigation should consider the role of the various entities, namely Tongaat, Fortress and UPL.
3. Samples of the various affected media must be taken immediately in line with protocols for criminal investigation.
4. Although this report only summarises briefly the actions taken to respond to this incident, it is recommended that the response of the authorities to the incident should be evaluated and any failings identified for appropriate departmental action.

As a broader investigation

5. A baseline compliance profile assessment of the agrochemical storage and manufacturing sector and based on the outcome of this assessment must be undertaken, and if necessary a compliance and/or enforcement programme targeting the sector should be developed.
6. Given the range of authorisations required by the sector, the scope of the above assessment could also include a review of the protocols / processes within the different relevant departments / units with the aim of streamlining these processes and improving communication and co-ordination.
7. Based on the evaluation of the authorities' response to this incident, a need to establish an interdepartmental rapid emergency response team to deal with a certain category of incidents, comprising technical experts within the government structures should be determined.
8. In order to ensure certainty in relation to which authority within government is best placed to lead an intergovernmental response to high-risk emergency incidents, an assessment should be undertaken of whether or not the environmental risk posed by the incident should be used as a guide to assign such a

competence. In this regard the provisions of Section 30 of the NEMA, as far as it relates to the definition of “a *relevant authority*”, should be reviewed.

9. Likewise, the apparent hierarchy created by section 30(2), which determines the order in which relevant authorities can or should take steps, should be reviewed.
10. Depending on the review of section 30 of NEMA, possible amendments to the legislation should be considered.
11. The establishment of a panel of intergovernmental specialists which could be called upon to provide expert advice when dealing with these types of emergency responses should be considered.
12. The feasibility of creating a mobile command centre which has the basic equipment which can be used to assist in a government response to these types of incidents should be considered.

The environmental authorities are the custodians of the environment, which hold the environment in public trust for current and future generations. There is an obligation on these authorities to ensure that, not only is the environment remediated, but to hold accountable those responsible for causing this situation which has resulted in significant harm to the environment.

REFERENCES:

Hurt, Quentin, 16 August 2021, Skyside. Air Monitoring UPL Fire, Cornubia, Durban. Updates of 16 August 2021 – Preliminary Report for Working Group Information.

King, Vicky, 25 August 2021. Weekly Report in terms of section 6.7 of the Directive in terms of the National Environmental Management Act, 1998 (Act No 107 of 1998 as amended regarding the alleged arson incident resulting in the release of pesticide/ insecticide at United Phosphorous Limited (UPL) Warehouse situated at 30 Umganu Road in Cornubia. Located within the Ethekwini Municipality

https://www.business-standard.com/article/companies/with-4-2-bn-arysta-deal-done-upl-is-world-s-top-5-farm-solutions-firm-119020400973_1.html

Legislation:

Adjustment of Fines Act 101 of 1991

Constitution of the Republic of South Africa 1996

Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947

Hazardous Substances Act 15 of 1973

KwaZulu-Natal Nature Conservation Management Act 9 of 1997

Occupational Health and Safety Act 85 of 1993

Nature Conservation Ordinance 15 of 1974

National Environmental Management Act 107 of 1998

National Environmental Management: Biodiversity Act 10 of 2004

National Environmental Management: Protected Areas Act 57 of 2003

National Water Act 36 of 1998

Regulations:

GNR 452 and GNR 453 of 25 March 1977

GNR 99 dated the 8th of February 2012

GNR 152 of the 23rd of February 2007

GNR 983 of 2014, Environmental Impact Assessment Regulations Listing Notice 1 of 2014

GNR 984 of 2014, Environmental Impact Assessment Regulations Listing Notice 2 of 2014

GNR 985 of 2014, Environmental Impact Assessment Regulations Listing Notice 3 of 2014

GNR 692 of 30 July 2001, Major Hazard Installation Regulations

GNR 280 of 29 March 2021, Regulations for Hazardous Chemical Agents

Proclamation Notices:

Proclamation notice 74 of 1980

Proclamation notice 58 of 1986