

negligible to large. Some impacts will result in changes to the environment that may be immeasurable, undetectable or within the range of normal natural variation. Such changes can be regarded as essentially having no impact, and should be characterised as having a negligible magnitude.

In addition to characterising the magnitude of impact, the other principal step necessary to assign significance for a given impact is to define the sensitivity/vulnerability/ irreplaceability of the resource/receptor. There are a range of factors to be taken into account when defining the sensitivity/vulnerability/ irreplaceability of the resource/receptor, which may be physical, biological, cultural or human. Where the resource is *physical* (for example, a water body) its quality, sensitivity to change and importance (on a local, national and international scale) are considered. Where the resource/receptor is *biological or cultural* (for example, the marine environment or a coral reef), its importance (for example, its local, regional, national or international importance) and its sensitivity to the specific type of impact are considered. Where the receptor is *human*, the vulnerability of the individual, community or wider societal group is considered.

As in the case of magnitude, the sensitivity/vulnerability/ irreplaceability designations themselves are universally consistent, but the definitions for these designations will vary on a resource/receptor basis. The universal sensitivity/vulnerability/irreplaceability ^(c) of resource/receptor is:

- Low
- Medium
- High

Once magnitude of impact and sensitivity/vulnerability/irreplaceability of resource/receptor have been characterised, the significance can be assigned for each impact. The following provides a context for defining significance.

Table 1.4 Context for Defining Significance

- | |
|---|
| <ul style="list-style-type: none"> • An impact of <i>negligible</i> significance is one where a resource/receptor (including people) will essentially not be affected in any way by a particular activity or the predicted effect is deemed to be 'imperceptible' or is indistinguishable from natural background variations. |
| <ul style="list-style-type: none"> • An impact of <i>minor</i> significance is one where a resource/receptor will experience a noticeable effect, but the impact magnitude is sufficiently small (with or without mitigation) and/or the resource/receptor is of low sensitivity/vulnerability/ importance. In either case, the magnitude should be well within applicable standards. |
| <ul style="list-style-type: none"> • An impact of <i>moderate</i> significance has an impact magnitude that is within applicable standards, but falls somewhere in the range from a threshold below which the impact is minor, up to a level that might be just short of breaching a legal limit. Clearly, to design an activity so that its effects only just avoid breaking a law and/or cause a major impact is not best practice. The emphasis for moderate impacts is therefore on demonstrating that the impact has been reduced to a level that is as low as reasonably practicable (ALARP). This does not necessarily mean that impacts of moderate significance have to be reduced to minor, but that moderate impacts are being managed effectively and efficiently. |

(c) Irreplaceable (SANBI, 2013): "In terms of biodiversity, irreplaceable areas are those of highest biodiversity value outside the formal protected area network. They support unique biodiversity features, such as endangered species or rare habitat patches that do not occur anywhere else in the province. These features have already been so reduced by loss of natural habitat, that 100% of what remains must be protected to achieve biodiversity targets."

- An impact of *major* significance is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors. An aim of IA is to get to a position where the Project does not have any major residual impacts, certainly not ones that would endure into the long-term or extend over a large area. However, for some aspects there may be major residual impacts remaining even after all practicable mitigation options have been exhausted (i.e. ALARP has been applied). An example might be the visual impact of a facility. It is then the function of regulators and stakeholders to weigh such negative factors against the positive ones, such as employment, in coming to a decision on the Project.

Based on the context for defining significance, the impact significance rating will be determined, using the matrix below.

Table 1.5 Impact Significance Rating Matrix

		Sensitivity/Vulnerability/Irreplaceability of Resource/Receptor		
		Low	Medium	High
Magnitude of Impact	Negligible	Negligible	Negligible	Negligible
	Small	Negligible	Minor	Moderate
	Medium	Minor	Moderate	Major
	Large	Moderate	Major	Major

Once the significance of the impact has been determined, it is important to qualify the **degree of confidence** in the assessment. Confidence in the prediction is associated with any uncertainties, for example, where information is insufficient to assess the impact. Degree of confidence can be expressed as low, medium or high.

Appendix B

B.1 Noise Monitoring Record Sheets

- **Position MP01**

Located at the beginning of Koingnaas village approximately 2.2 km north east from the mining area. GPS coordinates – S 30°12'3.15" E 17°16'35.39"

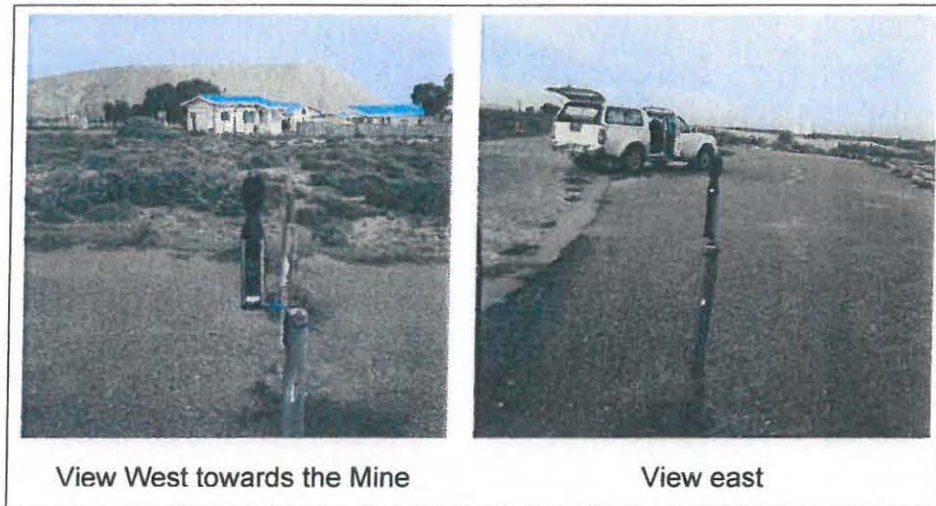


Figure B-1. MP01 Images

- **Position MP02**

This point was located at Hondeklip bay approximately 1.3 km south of the mining area
GPS coordinates – S 30°11'37.89" E 17°17'20.08"

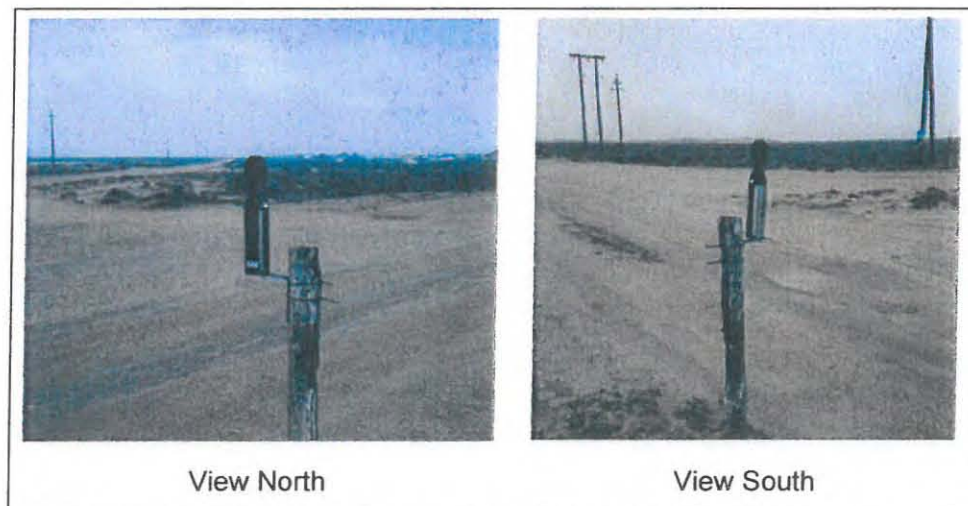


Figure B-2. MP02 Images

- **Position MP03**

This point was located at Barratini Street in Koingnaas Town. The measurement at this point was performed continuously over two days and nights.

GPS coordinates – S 30°11'37.89" E 17°17'20.08"



Figure B-3. MP03 Images

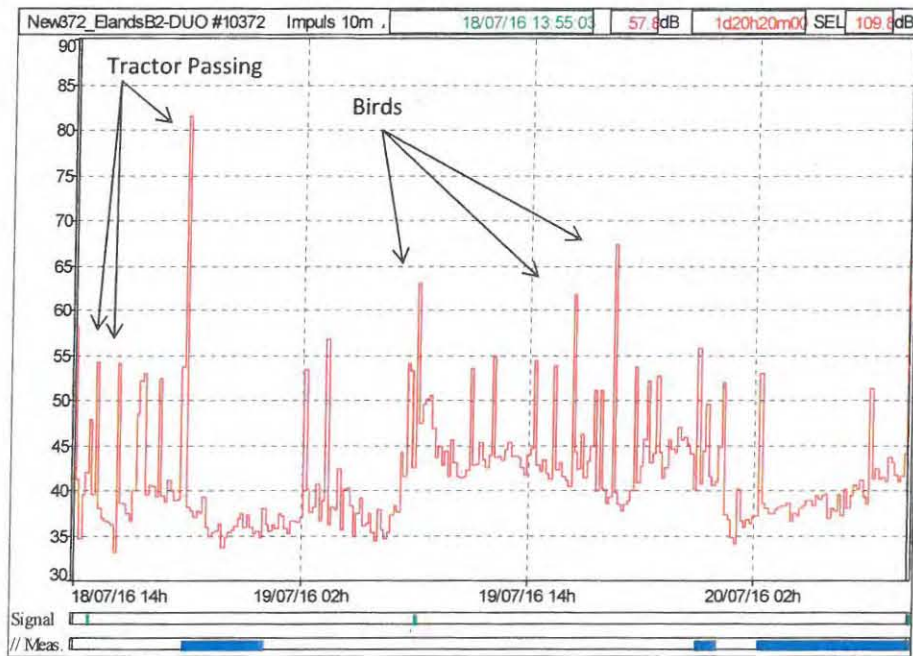
Table B-6-2: Noise Measurements Results

Date - Time	Measurement Position	Location	WS	L _{Aeq,1}	L _{Amin}	L _{Amax}	L ₉₀	L ₅₀	L ₁₀	Comments	
			(m/s)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		
2016-06-30 18:15	MP01	Residential	1.5	36.1	28.4	55.4	28.7	30.3	31.9	35.8	Human activities audible
2016-06-30 18:25	MP01	Residential	1.8	40.1	29.6	55.3	30.2	31.2	33.3	45.3	
2016-06-30 19:15	MP02	Residential	1.6	47.5	41.3	51.5	41.2	42.4	46.2	50.8	Human activities, Sea waves audible
2016-06-30 19:25	MP02	Residential	2.5	40.9	32.6	57.8	32.7	33.6	37.7	40	
2016-06-30 19:35	MP02	Residential	2.3	61.9	29.1	82.3	29.7	33.1	39	53	
2016-06-30 19:45	MP02	Residential	2.4	39.9	27.6	58.3	30.4	32.6	36.4	39.7	Sea waves and birds audible
2016-06-30 22:15	MP02	Residential	1.2	38.1	24.8	64.5	24.8	25.8	38.2	50.5	
2016-06-30 22:25	MP02	Residential	0.8	44.8	25	57.8	25.1	25.8	37.8	47.8	Dogs barking, birds and insects activities audible
2016-06-30 22:55	MP01	Residential	1.8	39.8	25.2	53.3	25.3	25.8	27.6	44.4	
2016-06-30 23:05	MP01	Residential	1.2	37.4	25.2	54.2	25.2	25.5	26.1	36.3	
2016-06-30 23:15	MP01	Residential	0.8	26.6	25.1	33.9	25.1	25.6	26.3	27.1	
2016-06-30 23:25	MP01	Residential	0.6	34.5	26.4	51.3	26.5	26.8	27.7	29.6	
2016-07-01 10:35	MP02	Residential	2.4	50.5	45.7	66.5	46	46.8	48.5	51.4	Human activities, Sea waves audible
2016-07-01 10:45	MP02	Residential	2.5	51.3	45.9	60.5	46.2	47.5	49.7	53.1	
2016-07-01 10:55	MP02	Residential	3.2	51	46.1	64.3	46.4	48.1	49.9	52	
2016-07-01 11:05	MP02	Residential	4.2	52.7	41.3	68	46.7	48.3	50.7	53.4	Human activities, Traffic, audible
2016-07-01 12:05	MP01	Residential	1.6	44.8	40.8	47.7	40.7	41.9	43.9	47.2	
2016-07-01 12:15	MP01	Residential	1.6	44.5	35.9	57.6	36.5	37.4	40.7	46.8	Human activities, Sea waves audible
2016-07-01 12:25	MP01	Residential	1.8	43.9	35.8	61.8	35.8	36.6	38	43	
2016-07-01 12:35	MP01	Residential	1.9	46.4	35.8	60	36.4	37.6	40.6	50.2	
2016-07-01 14:35	MP02	Residential	3.8	47.7	34.2	60.6	34.2	37.2	41.6	51.1	Human activities
2016-07-01 14:45	MP02	Residential	3.9	52.6	34	73.8	35.6	39.9	44.4	50.8	
2016-07-01 14:55	MP02	Residential	4.5	45.1	34.8	53.3	35.5	38.5	43.1	48.2	Human activities, Sea waves audible
2016-07-01 15:05	MP02	Residential	3.6	59.5	34.4	82.3	36.4	40.8	47.3	54.1	
2016-07-01 15:15	MP02	Residential	2.2	50.9	37.8	61.2	38.4	41.5	47.1	55.3	Human activities
2016-07-01 15:35	MP01	Residential	1.8	50.3	49.8	50.6	49.7	49.7	50.2	50.5	
2016-07-01 15:45	MP01	Residential	2.4	47.7	44.3	55.7	44.6	45.9	47.2	48.9	
2016-07-01 15:55	MP01	Residential	3.6	52.2	44	67.6	44.4	45.9	47.4	52.5	
2016-07-01 16:05	MP01	Residential	2.2	50.5	44.3	69.1	44.6	46	47.4	50	

Noise Impact Assessment: Koingnaas and Samsons Bak Complex Diamond Mining Project

Date - Time	Measurement Position	Location	WS	L _{App,1}	L _{Amin}	L _{Amax}	L ₉₉	L ₉₀	L ₅₀	L ₁₀	Comments
			(m/s)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		
2016-07-01 22:15	MP02	Residential	0.8	48.6	28.1	60.9	28	28.7	31.4	53.3	Sea waves and birds audible
2016-07-01 22:25	MP02	Residential	2.4	31.6	27.2	41	27.5	29	30.6	33.2	
2016-07-01 22:35	MP02	Residential	2.9	32	27.2	70.9	27.9	29	30.8	34.9	
2016-07-01 22:45	MP02	Residential	2.2	43	27.1	59.8	27.6	29.2	31	43.1	
2016-07-01 23:05	MP01	Residential	1.6	37.9	28.1	51.9	28.7	29.7	31.5	39.3	
2016-07-01 23:15	MP01	Residential	0.5	36	27.2	52.6	27.8	29	30.9	35.7	
2016-07-01 23:25	MP01	Residential	0.6	35.1	28.3	53.3	28.8	29.7	31.2	33.8	

B.2 Noise Survey Results for Continuous Monitoring at MP03



Appendix C

C.1 Sound Power Ratings

Table C-6-3: Plants and Mining Sources Sound Power Emission Levels

POINT SOURCES						
Id	Source Type	Sound Power Level		Coordinates		
		Day	Night	X	Y	Z
		(dB(A))	(dB(A))	(m)	(m)	(m)
P1Vibrating Gr	Plant 1 Vibrating Grizzly	98.2	98.2	148757.2	6627949.4	32.3
P1Prim Jet Mod	Plant 1 Jet Pump Module	95.8	95.8	148750.9	6627946.5	32.2
P1Screen Module	Plant 1 Screen	98.2	98.2	148764.4	6627897.8	34.4
P1Scrub Module	Plant 1 Scrub Module	87.1	87.1	148761.1	6627905.9	36.0
P1Screen b	Plant 1 Screen b	102.5	102.5	148754.2	6627965.2	29.4
PL1 FEL	FEL at Plant 1	106.7	106.7	148756.7	6627974.8	29.5
Dozer1SS	Dozer at South Working Face for Plant 1	111.9	111.9	149573.9	6625319.9	3.3
Dozer2NS	Dozer at North Working Face for Plant 1	111.9	111.9	143682.5	6634925.0	2.6
FEL3NS	FEL at North Working Face for Plant 1	109.7	109.7	143651.9	6635019.4	5.0
FEL4NS	FEL at North Working Face for Plant 1	109.7	109.7	143708.2	6634876.2	2.0
FEL2SS	FEL at South Working Face for Plant 1	109.7	109.7	149588.1	6625347.6	20.3
FEL1SS	FEL at South Working Face for Plant 1	109.7	109.7	149518.1	6625371.9	9.9
TruckL01SS	Truck Loading at South Working Face for PL 1	102.5	102.5	149507.3	6625371.9	8.1
TruckL03NS	Truck Loading at North Working Face for PL 1	102.5	102.5	143711.5	6634871.7	2.0
Excav1SS	Excavator at South Working Face for PL1	110.4	110.4	149588.3	6625293.5	8.0

Noise Impact Assessment: Koingnaas and Samsons Bak Complex Diamond Mining Project

Excav2SS	Excavator at South Working Face for PL1	112.1	112.1	149635.5	6625310.1	19.7
Excav3SS	Excavator at South Working Face for PL1	110.4	110.4	149650.3	6625259.6	6.1
Excav4NS	Excavator at North Working Face for PL1	110.4	110.4	143652.9	6634957.6	3.5
Excav5NS	Excavator at North Working Face for PL1	110.4	110.4	143679.2	6634974.5	5.1
Excav5NS	Excavator at North Working Face for PL1	112.1	112.1	143611.0	6634998.4	3.2
Overb Loading SS	Overburden Loading at South Working Face	102.5	102.5	149593.3	6625352.9	24.0
OverbOLoading SS	Overburden Offloading at South Working Face	102.5	102.5	149263.4	6626003.5	25.5
OverbLoadingNS	Overburden Loading at North Working Face	102.5	102.5	143645.4	6635027.4	6.2
OverbOLoadingNS	Overburden Offloading at North Working Face	102.5	102.5	145870.3	6635451.9	34.3
P2Vibrating Gr	Plant 2 Vibrating Grizzly	98.2	98.2	140959.2	6651209.4	61.4
P2Prim Jet Mod	Plant 2 Jet Pump Module	95.8	95.8	140952.9	6651206.5	61.2
P2Screen Module	Plant 2 Screen	98.2	98.2	140966.4	6651157.8	61.9
P2Scrub Module	Plant 2 Scrub Module	87.1	87.1	140963.1	6651165.9	63.8
P2Screen b	Plant 2 Screen b	102.5	102.5	140956.2	6651225.2	58.9
PL2 FEL	FEL at Plant 2	106.7	106.7	140958.7	6651234.8	59.1
Dozer2NN	Dozer at North Working Face for Plant 2	111.9	111.9	137164.5	6653425.0	13.6
FEL3NN	FEL at North Working Face for Plant 2	109.7	109.7	137133.9	6653519.4	9.3
FEL4NN	FEL at North Working Face for Plant 2	109.7	109.7	137190.2	6653376.2	14.4
TruckL03NN	Truck Loading at North Working Face for PI 2	102.5	102.5	137193.5	6653371.7	14.5
Excav4NN	Excavator at North Working Face for PL2	110.4	110.4	137134.9	6653457.6	12.4
Excav5NN	Excavator at North Working Face for PL2	110.4	110.4	137161.2	6653474.5	14.2
Excav5NN	Excavator at North Working Face for PL2	112.1	112.1	137093.0	6653498.4	3.0
OverbLoadingNN	Overburden Loading at North Working Face	102.5	102.5	137127.4	6653527.4	10.1
OverbLoading2NN	Overburden Offloading at North Working Face	102.5	102.5	137875.9	6654689.6	41.3
Dozer1NS	Dozer at South Working Face for Plant 2	111.9	111.9	140575.9	6644619.9	5.8
FEL2NS	FEL at South Working Face for Plant 2	109.7	109.7	140590.1	6644647.6	8.9

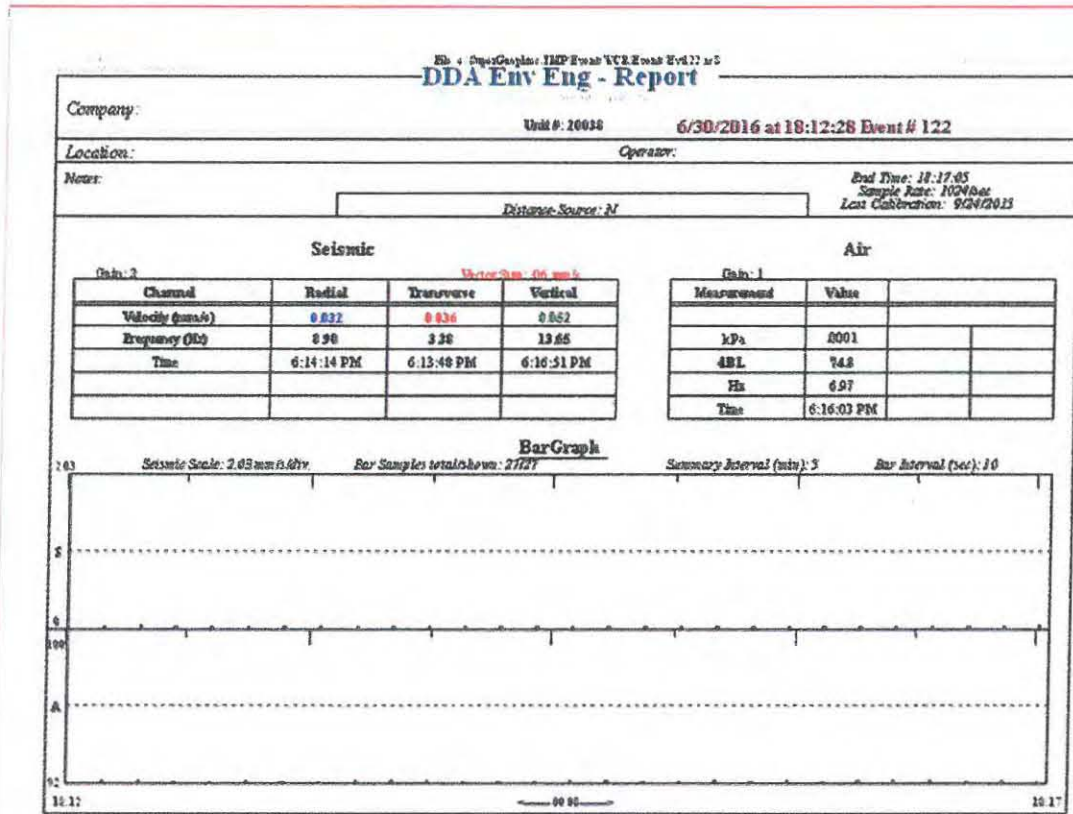
Noise Impact Assessment: Koiingnaas and Samsons Bak Complex Diamond Mining Project

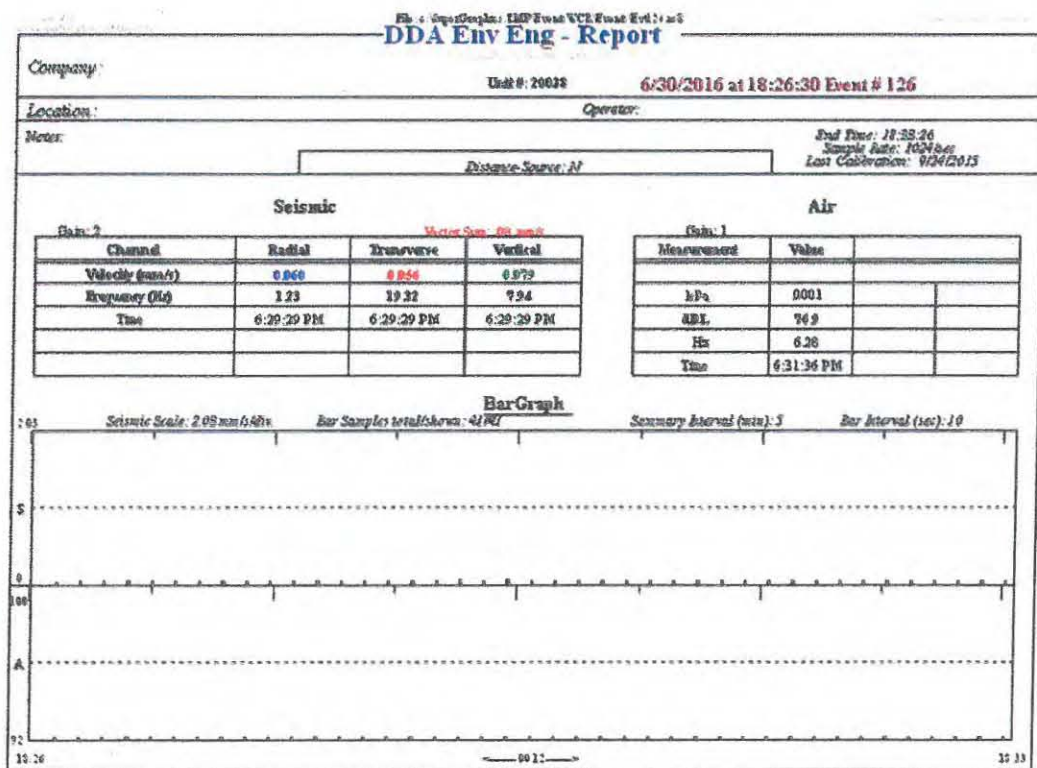
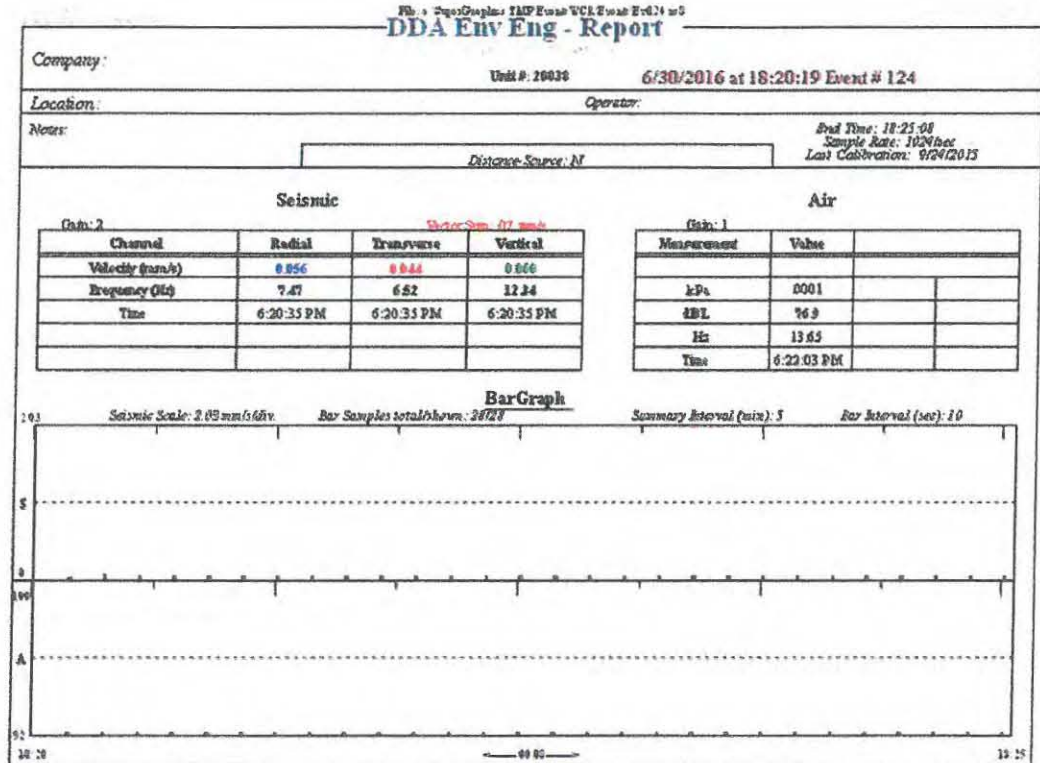
FEL1NS	FEL at South Working Face for Plant 2	109.7	109.7	140520.1	6644671.9	5.4
TruckL01NS	Truck Loading at South Working Face for PI 2	102.5	102.5	140509.3	6644671.9	5.3
Excav1NS	Excavator at South Working Face for PL2	110.4	110.4	140590.3	6644593.5	6.8
Excav2NS	Excavator at South Working Face for PL2	112.1	112.1	140637.5	6644610.1	11.6
Excav3NS	Excavator at South Working Face for PL2	110.4	110.4	140652.3	6644559.6	6.6
Overb Loading NS	Overburden Loading at South Working Face	102.5	102.5	140595.3	6644652.9	11.3
LINE SOURCES						
Id	Source Type	Sound Power Level		Sound Power Level		
		Day	Night	Day	Night	
		(dB(A))	(dB(A))	(dB(A)/m)	(dB(A)/m)	
Plant1 Conv Belt	Plant 1 Conveyor Belt 1	98.6	98.6	85.5	85.5	
Plant1 Conv Belt2	Plant 1 Conveyor Belt 2	98.3	98.3	85.5	85.5	
Plant1 Conv Belt3	Plant 1 Conveyor Belt 3	96.3	96.3	85.5	85.5	
Plant1 Conv Belt4	Plant 1 Conveyor Belt 4	100	100	85.5	85.5	
Plant1 Conv Belt5	Plant 1 Conveyor Belt 5	100.9	100.9	85.5	85.5	
Plant1 Conv Belt6	Plant 1 Conveyor Belt 6	96.6	96.6	85.5	85.5	
Plant2 Conv Belt	Plant 2 Conveyor Belt 1	98.6	98.6	85.5	85.5	
Plant2 Conv Belt2	Plant 2 Conveyor Belt 2	98.3	98.3	85.5	85.5	
Plant2 Conv Belt3	Plant 2 Conveyor Belt 3	96.3	96.3	85.5	85.5	
Plant2 Conv Belt4	Plant 2 Conveyor Belt 4	99.9	99.9	85.5	85.5	
Plant2 Conv Belt5	Plant 2 Conveyor Belt 5	100.9	100.9	85.5	85.5	
Plant2 Conv Belt6	Plant 2 Conveyor Belt 6	96.5	96.5	85.5	85.5	

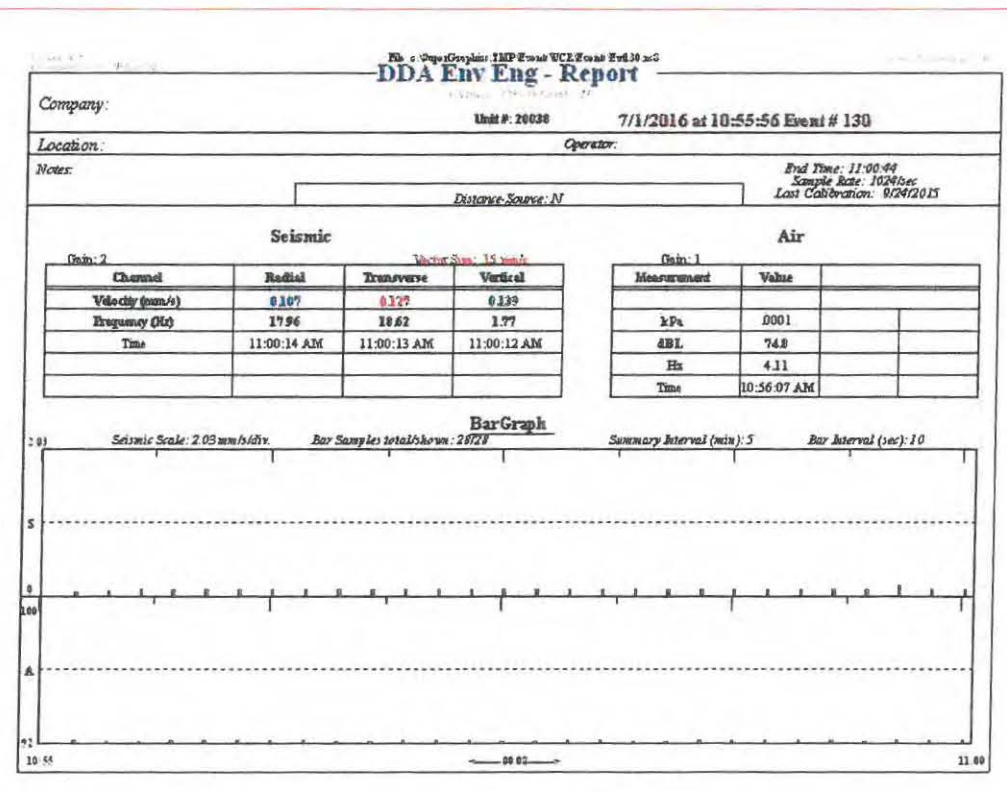
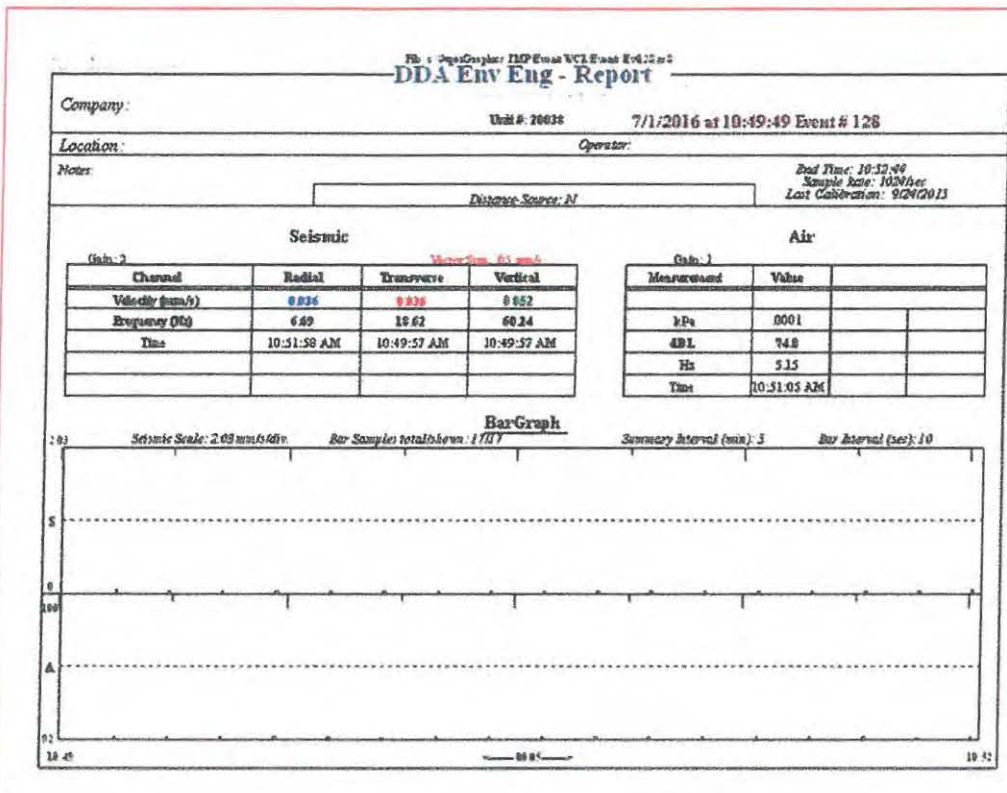
ROAD SOURCES									
Id	Source Type	Sound Power Level		Vehicles Number		Heavy Vehicles		Maximum Speed	
		Day	Night	Day	Night	Day	Night	Auto	Heavy
		(dB(A)/m)	(dB(A)/m)	(veh/hr)	(veh/hr)	(%)	(%)	(km/hr)	(km/hr)
Road1S	Trucks to Plant 1 from South WF	77.3	77.3	12	12	100	100	35	35
Road1N	Trucks to Plant 1 from North WF	75.6	75.6	8	8	100	100	35	35
Overburden1N	Truck to Overburden Dump from North WF	74.3	74.3	6	6	100	100	35	35
Overburden1S	Truck to Overburden Dump from South WF	74.3	74.3	6	6	100	100	35	35
Road2N	Trucks to Plant 2 from South WF	77.3	77.3	12	12	100	100	35	35
Overburden2N	Truck to Overburden Dump from North WF	74.3	74.3	6	6	100	100	35	35
Overburden2S	Truck to Overburden Dump from South WF	74.3	74.3	6	6	100	100	35	35
Road2S	Trucks to Plant 2 from North WF	75.6	75.6	8	8	100	100	35	35

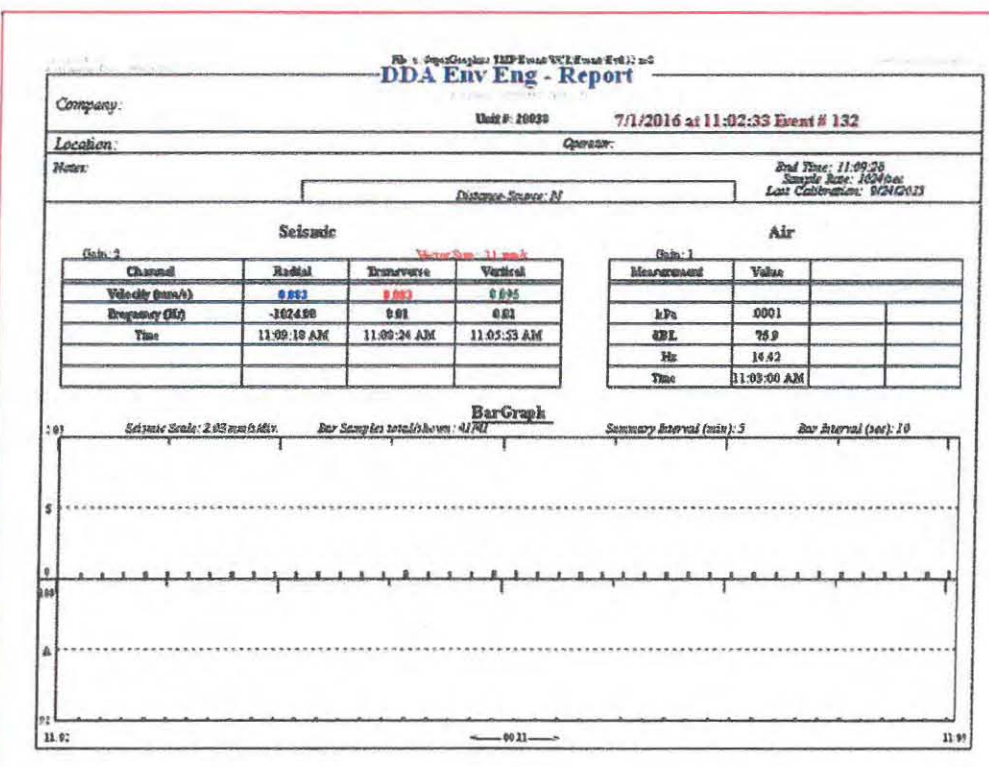
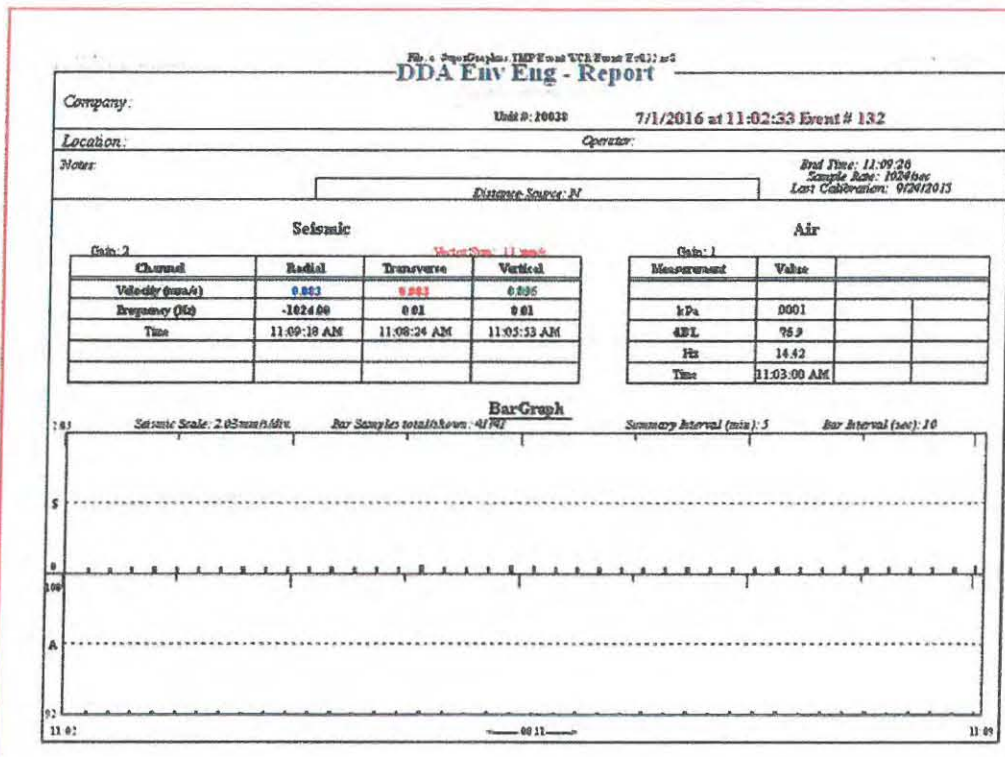
Appendix D

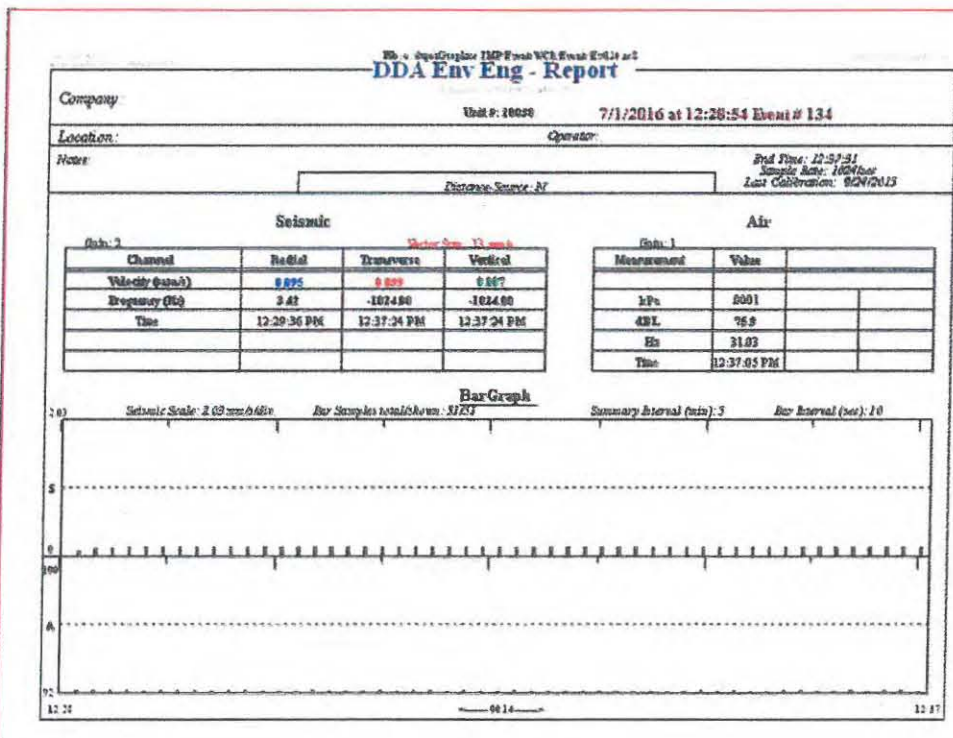
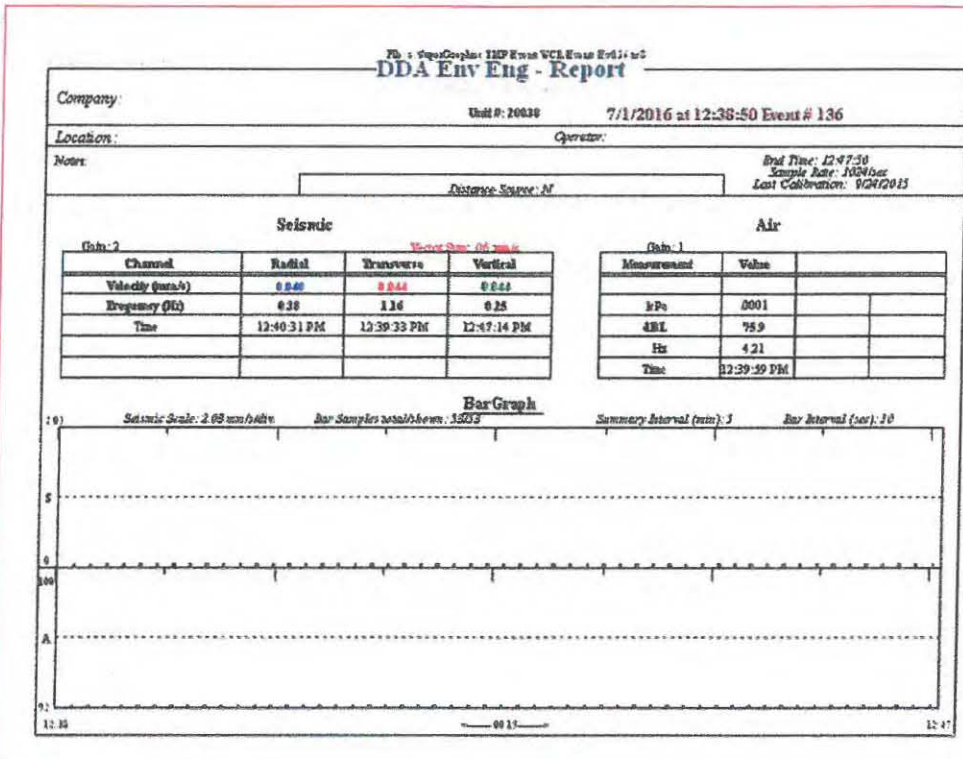
D.1 Vibration Monitoring Sheet

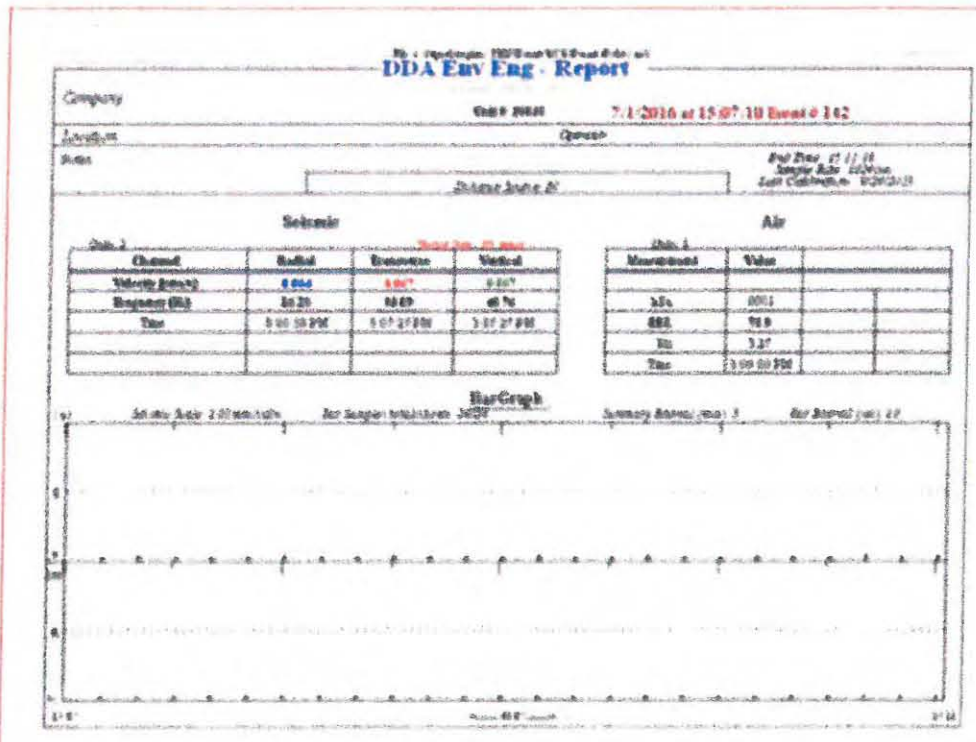
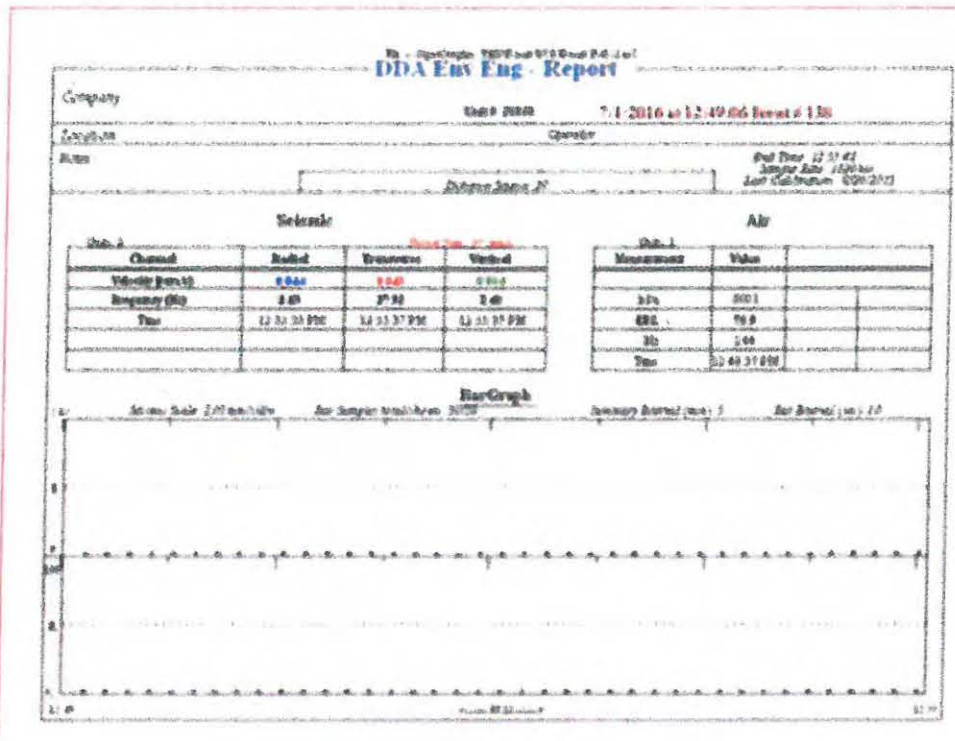


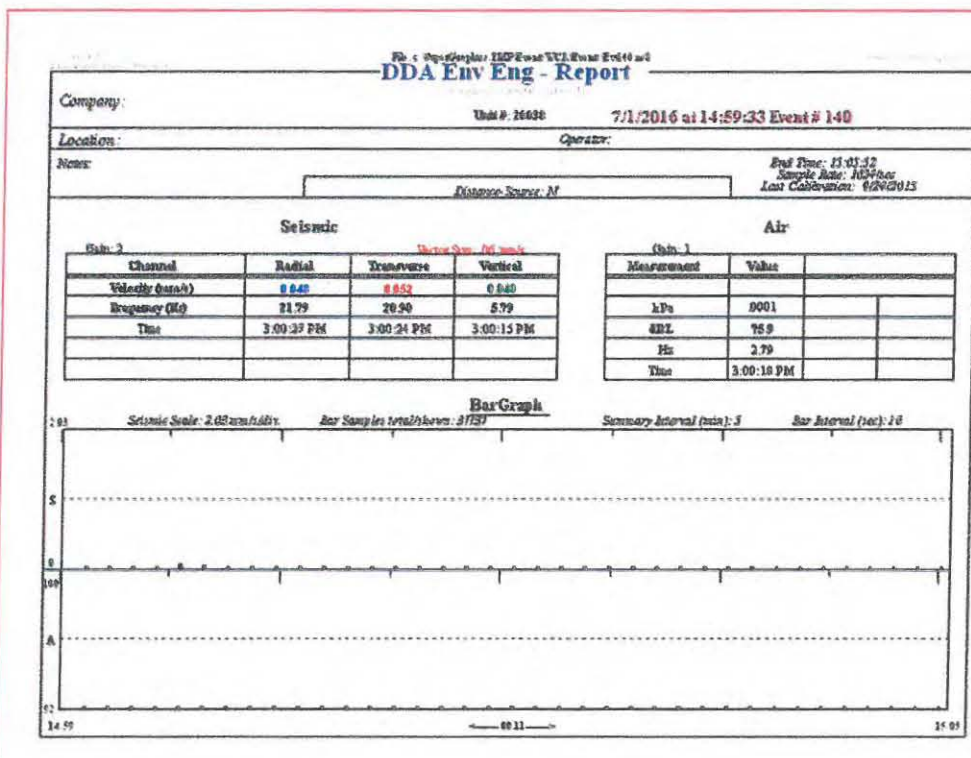
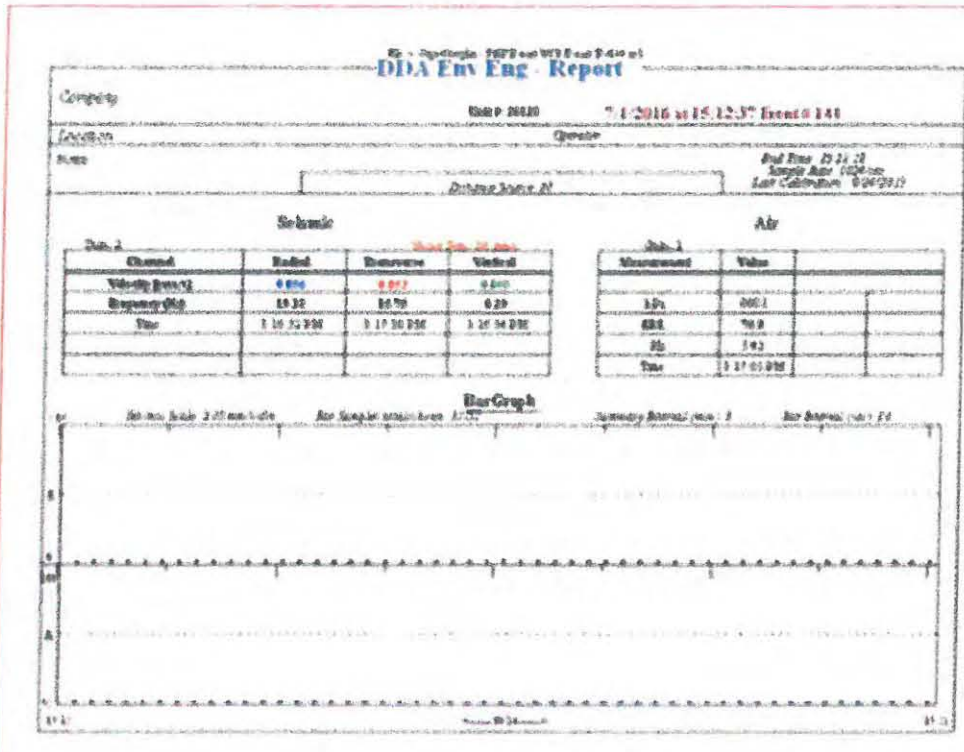


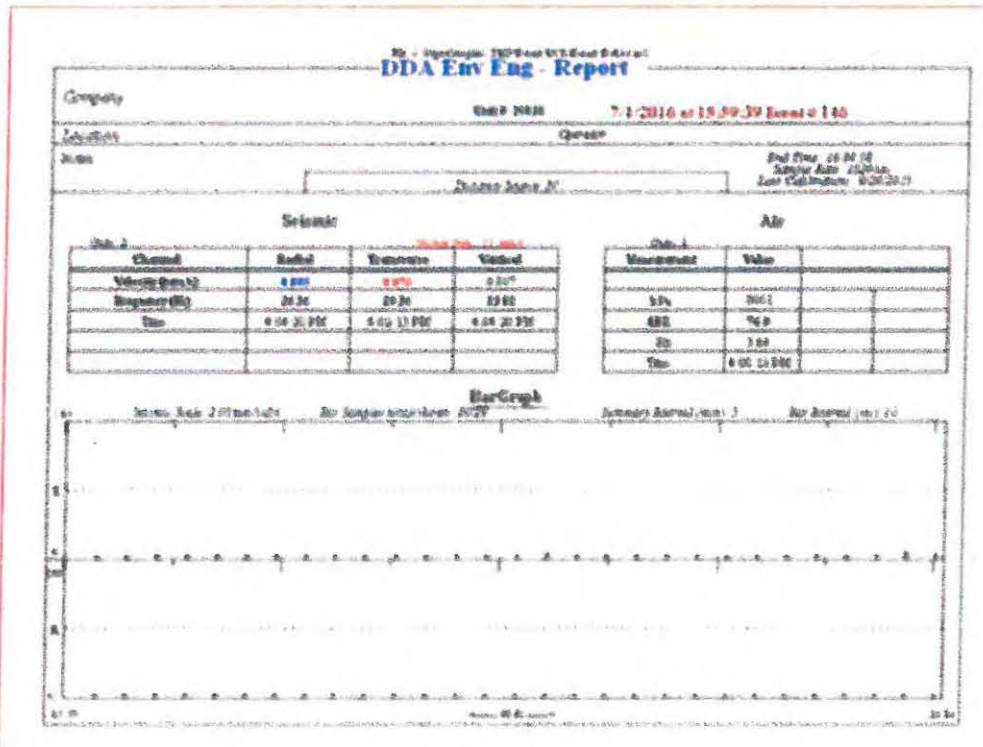
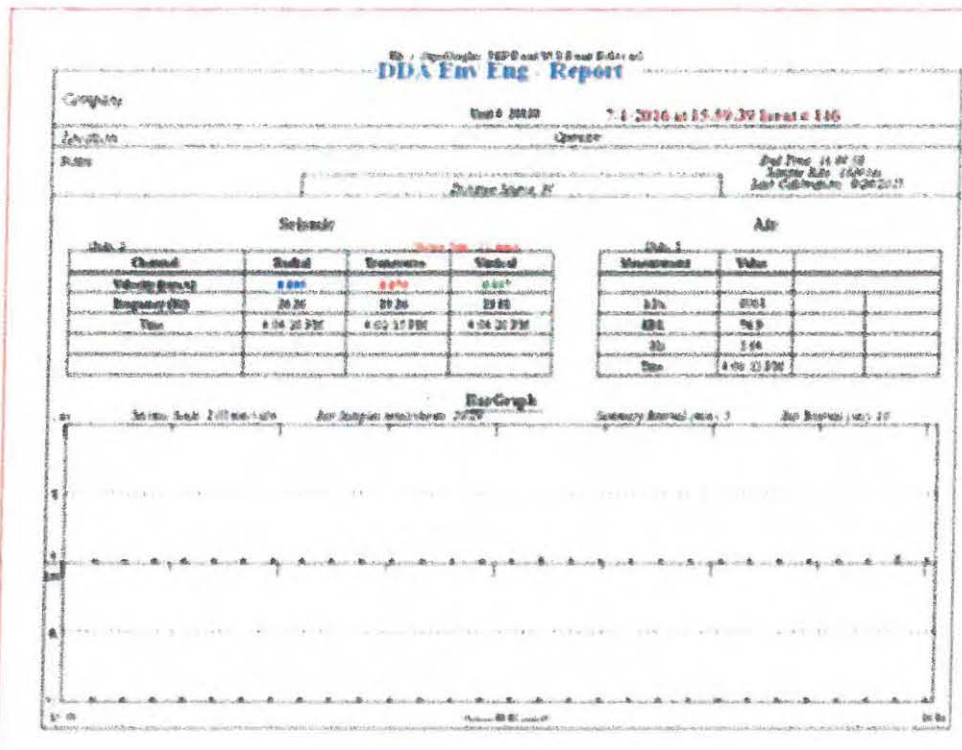


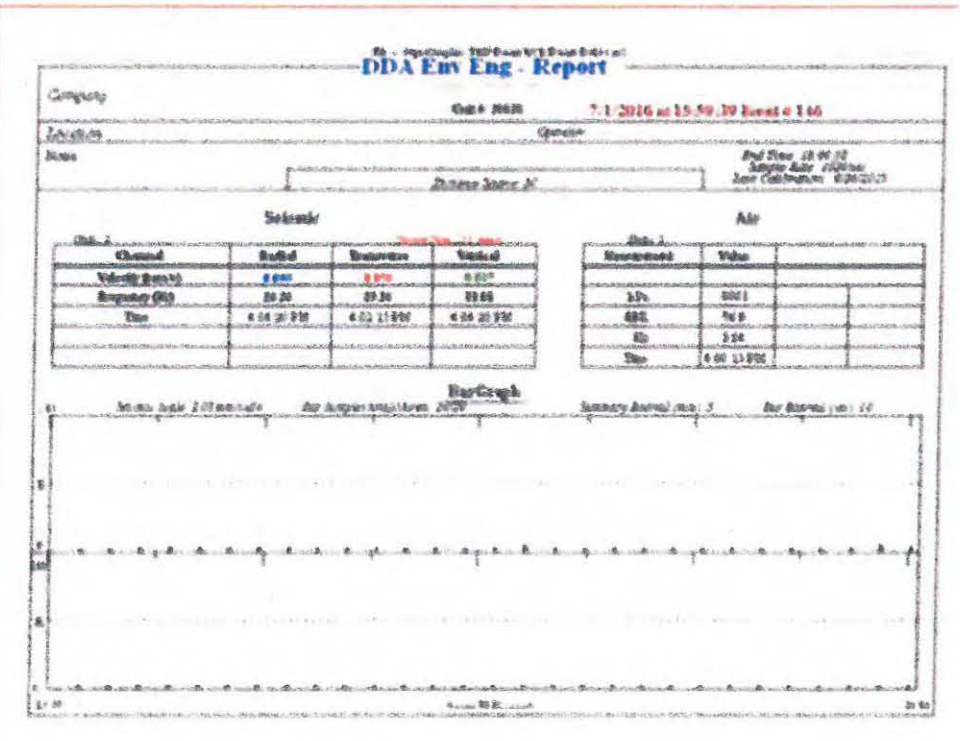
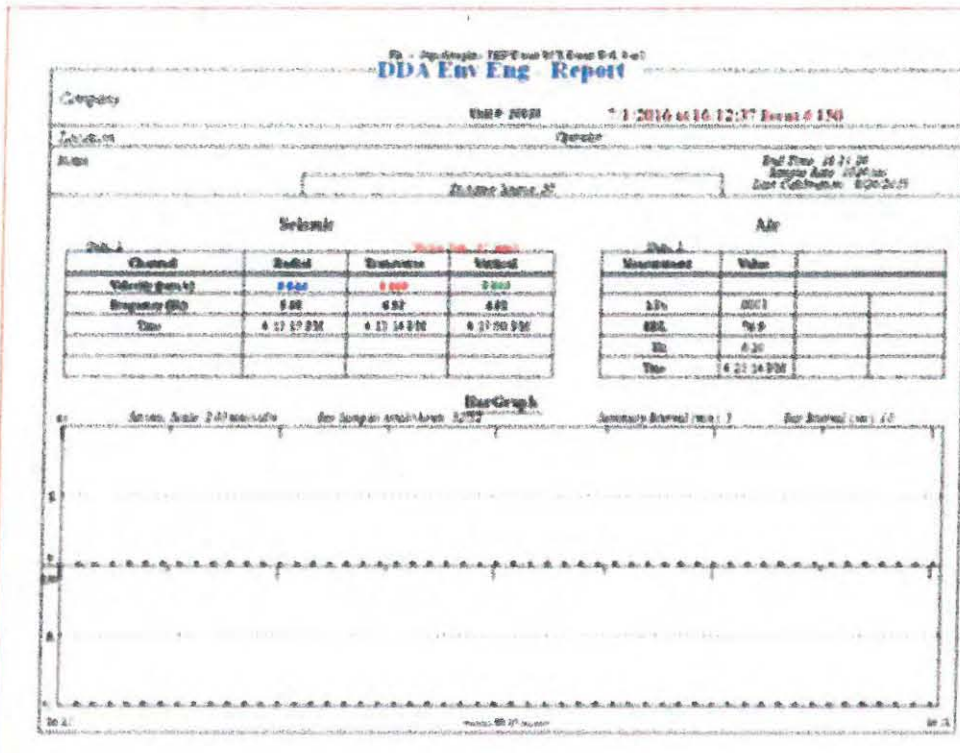


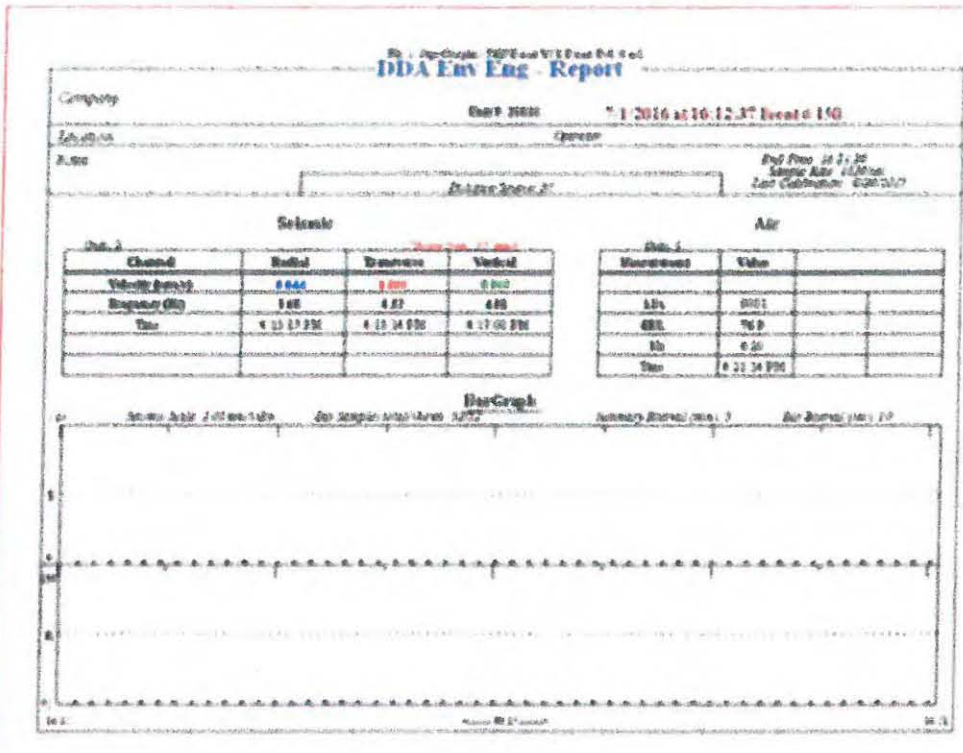












Appendix E

E.1 Declaration of Consultant's Independence

The author of this report, Demos Dracoulides, does hereby declare that he is an independent consultant appointed by ERM and has no business, financial, personal or other interest in the activity, application or appeal in respect of which he was appointed other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances that compromise the objectivity of the specialist performing such work. All opinions expressed in this report are his own.



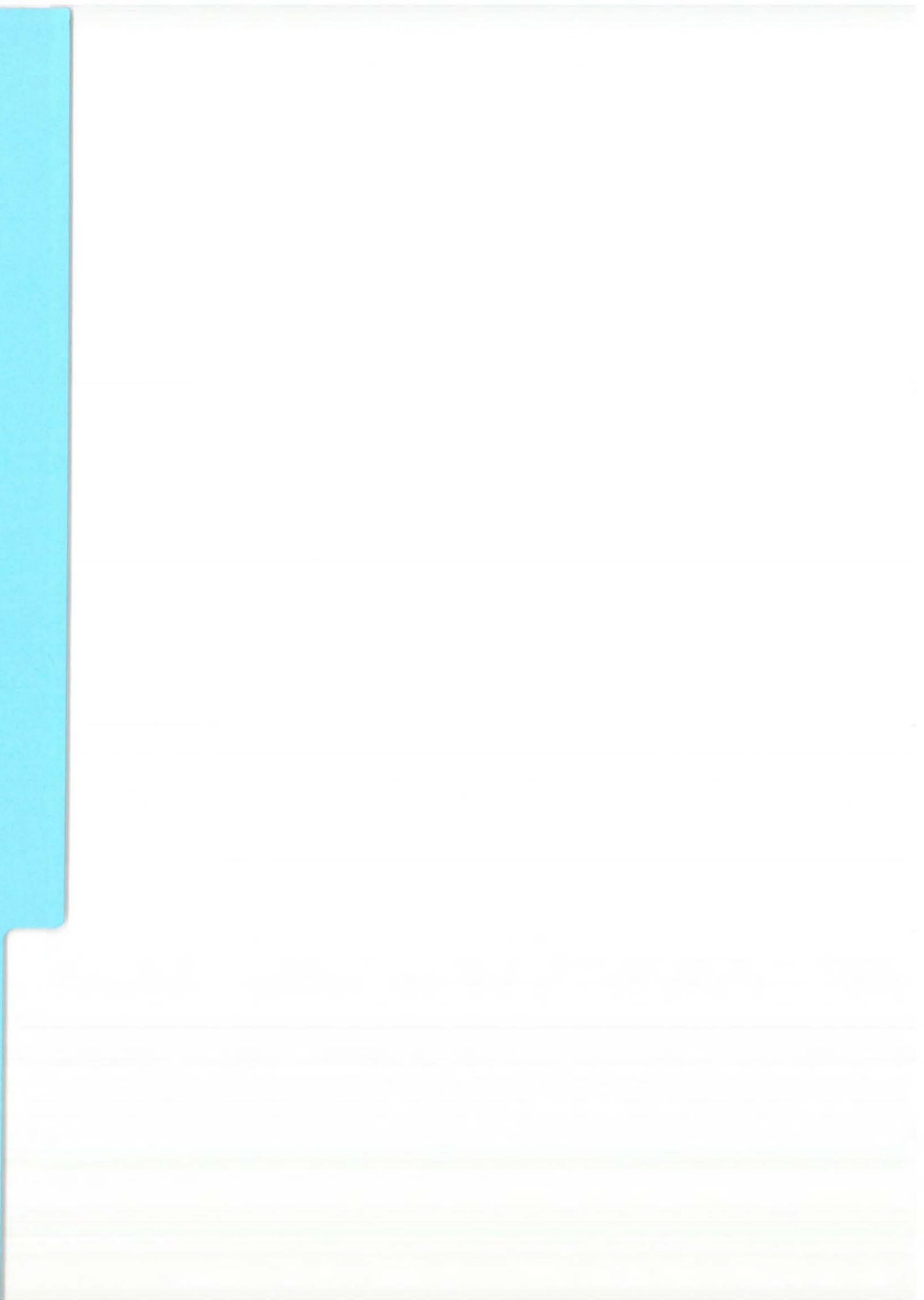
Demos Dracoulides:

October 2016



WEST COAST RESOURCES (PTY) LTD
KOINGNAAS AND SAMSONS BAK COMPLEX
ENVIRONMENTAL IMPACT ASSESSMENT REPORT

10. Social impact assessment study



**SOCIAL IMPACT ASSESSMENT
FOR
KOINGNAAS AND SAMSONS BAK COMPLEX
DIAMOND MINING PROJECT
NORTHERN CAPE PROVINCE**

SEPTEMBER 2016

Prepared for

MYEZO ENVIRONMENTAL MANAGEMENT SERVICES

By

Tony Barbour

Tony Barbour

ENVIRONMENTAL CONSULTANTING AND RESEARCH

10 Firs Avenue, Claremont, South Africa

(Tel) 27-21-761 2355 - (Fax) 27-21-761 2355 - (Cell) 082 600 8266

(E-Mail) tbarbour@telkomsa.net

EXECUTIVE SUMMARY

INTRODUCTION AND LOCATION

West Coast Resources (Pty) Ltd (WCR) is a private company owned by Trans Hex Operations (Pty) Ltd (Trans Hex), RE:CM and Calible Limited (RAC), the Government of South Africa, Dinoka Investment Holdings (Pty) Ltd and the Namaqualand Diamond Trust Fund, a broad based community trust representing historically disadvantaged persons from the Namaqualand community. WCR has existing converted mining rights and prospecting rights over the area, including a number of properties situated approximately 50 kilometres west of Kamieskroon and extending north and south of Hondeklip Bay on the West Coast of the Northern Cape Province, South Africa.

Trans Hex has entered into an agreement with the other shareholders of WCR to oversee and manage the operations of WCR. WCR is re-establishing a diamond mining operations in the Koingnaas area on the Namaqualand coast, which was previously mined by De Beers and under the existing mining environmental authorisation of July 2012. As part of their operations, WCR intend to mine deposits that are located on land as well as specific deposits that extend seaward from the land for potentially for several hundred metres. The focus of the Environmental Impact Assessment (EIA) is on the mining relate activities that are proposed and the associated processing activities. Myezo Environmental Management Services were appointed by WCR to manage the Environmental Impact Assessment (EIA) process.

Tony Barbour was appointed by Myezo Environmental Management Services to undertake a specialist Social Impact Assessment (SIA) as part of the EIA process.

SUMMARY OF KEY FINDINGS

The key findings of the study are summarised under the following sections:

- Fit with policy and planning;
- Operational phase impacts;
- No-development option.

As indicated in Section 1, in the case of the proposed Koingnaas–Samsons Bak mining project there is no clear distinction between the construction and operational phase of the project. The project involves mining new areas associated with an already established mining area. The key activities associated with establishment (construction phase) of the mining operation, such as infrastructure, access roads, housing, processing plant etc. were undertaken by De Beers. The focus of the SIA is therefore on the operational and decommissioning phase.

POLICY AND PLANNING FIT

For the purposes of the meeting the objectives of the SIA the following national, provincial and local level policy and planning documents were reviewed, namely:

National

- Mining Charter (2010);
- New Growth Path Framework (2010);

Provincial

- Northern Cape Provincial Growth and Development Strategy (2004-2014);
- Northern Cape Spatial Development Framework (2012).

District and local

- Namakwa District Municipality Integrated Development Plan (Review 2014/15);
- Namakwa District Local Economic Development Plan;
- Nama Khoi Local Municipality Integrated Development Plan (Review 2014/15);
- Kamiesberg Local Municipality Integrated Development Plan (2014/2015).

Based on the findings of the review the development of mining is supported as key investment sector in the New Growth Plan, Northern Cape Provincial Growth and Development Strategy (NCPGDS) and the Northern Cape Spatial Development Framework (NCSDf). In terms of supporting development in the mining sector the PGDS identifies a number of strategic interventions, including:

- Promote the development of synergies between the mining and other economic activities;
- Promote the role mines play in terms of rural economic development;
- Promote further large-scale mining development;
- Support small-scale mining development;
- Enhancing logistics for minerals development;
- Develop opportunities for black business development in the minerals sector.

Support for investment and creation of opportunities for job creation and economic development are also highlighted as key objectives in the Integrated Development Plans prepared by the Nama Khoi and Kamiesberg Local Municipalities.

Based on the findings of the review the proposed Koingnaas-Samsons Bak mining project is supported at a national, provincial and local planning and policy level.

OPERATIONAL PHASE SOCIAL IMPACTS

The key social issues associated with the operational phase include:

Potential positive impacts

- Creation of employment opportunities;
- Creation of skills development and training opportunities;
- Creation of business opportunities;
- Creation of opportunities to revitalise Koingnaas and Kleinzee;
- Support for local community initiatives and developments.

Employment

The current operations employ ~ 100 permanent staff, of which 93 (93%) are historically disadvantaged individuals (HDIs). In terms of employees from the local area, 93 (93%) of the total workforce comes from local towns in the area (Table 4.1). All of these workers are HDIs.

At full production the total workforce will number 250-300. As in the case of the current breakdown, more than 90% of this workforce will be HDIs. The proposed mining development will therefore create significant employment opportunities for HDIs. Although the employment opportunities will be limited to the life of mine,

which is currently estimated to be between 10 and 15 years, this will represent a significant benefit and opportunity for the local economy in the KLM and NKLM.

The total annual wage bill associated with the current operations which employs ~ 100 staff is R 31 million (2016 rand values). The annual total wage bill associated with a workforce of between 250 and 300 will be in the region of R 90 million (2016 rand values). The total wage bill (excluding annual increases) over the 10 to 15 life of mine would therefore be in the region of R 900 million to R 1.35 billion (2016 rand values).

As indicated above, 93% of the current employees are HDIs and live in local towns in the study area. These figures are also likely to apply to the full production workforce of 250-300. A significant portion (~70%) of the annual wage bill is and will be earned by HD members from the area and will be spent in local towns in the area. The injection of wage income over the 10 and 15 year life of mine (R 900 million to R 1.35 billion) will represent a significant socio-economic benefit and opportunity for the local economy and business in the KLM and NKLM.

Training and skills development

86 out of the current total of 100 current employees have undergone some form of training and skills development within the first 12 months of being employed. All of the recipients are HDIs. Similar on-going training and skills development opportunities will be provided for the additional workers employed when full production is achieved (250-300). As is currently the case, the majority of the beneficiaries will be HDIs from local communities in the NKLM and KLM. The proposed mining development will therefore create significant training and skills development opportunities for HDIs. Although these opportunities will be limited to the life of mine, which is currently estimated to be between 10 and 15 years, this will represent a significant benefit and opportunity for the workers and will increase their chances of finding alternative employment when the mining operations stop.

Creation of business opportunities

The creation of business opportunities will be linked to capital expenditure and procurement expenditure by WRC and wage spend by employees in the local economy.

WRCs capital expenditure associated with start-up activities amounts to ~ R 26 million (2016 rand values) for the first year of operations. The capital expenditure for the remaining 10 -15 years life of mine is estimated to be region of R 128 million (2016 rand values). This expenditure creates business opportunities for local companies involved in the mining sector.

In addition to capital expenditure WCR outsource a number of their operations to mining, service and security contractors etc. The total expenditure by WCR for period 2015/16 was therefore in the region of R 55 million (2016 rand values). This, like the annual wage bill, will increase when mining operations move into full production and will create opportunities for local businesses in the NKLM and KLM. WCRs are committed to the implementation of a preferential procurement plan as per the requirements set out in the Social Labour Plan (April 2015).

In addition to the business opportunities associated with the mining related expenditure a percentage of the annual wage bill (R90 million at full employment) will be spent in the towns where the workers live. As indicated above the total wage bill over the 10-15 life of mine will be in the region of R 900 million to R 1.34 billion.

The local spend of a percentage of this wage income will represent a significant socio-economic benefit and opportunity for the local economy and business in the KLM and NKLM.

Creation of opportunities to revitalise Koingnaas and Kleinzee

Given the limited economic opportunities in the area the mining operations proposed by WRCs provide an opportunity to act as catalyst to revitalise the towns of Koingnaas and Kleinzee. In this regard the presence of WCRs employees in these towns will create demand for services, such as doctors, pharmacists, etc. and facilities, such as supermarkets, sports facilities and restaurants. Friends and family members of WCR employees will also visit the towns, thereby increasing the demand for services and facilities and also increasing the exposure of these towns to the public.

In the absence of the potential opportunities created by the proposed mining there is a very real risk that the towns of Koingnaas and Kleinzee would deteriorate and become dysfunctional, run-down towns. If this happens it will pose a financial burden on the NKLM and KLM.

Support for community initiatives

In discussions with representatives from the NKLM and KLM WCRs have identified a number of community initiatives to support, including up-grading school facilities and covering salaries for school teachers and the establishment of play parks and internet cafes. A budget of ~ R 10 million has been allocated to supporting community initiatives over the next five years.

However, based on the feedback from the local community one of the key challenges facing the communities in Hondeklip Bay and Soebatsfontein was access to affordable public transport. There is no bus service that services the local small towns in the area and transport costs associated with travelling to towns such as Springbok, Garies and Kamieskroon are high. One the key costs that local parents are faced is the cost of transporting children to the high school in Garies. Due to the high transport costs a number of families cannot afford to send their children to high school. As a result they do not complete school and this places them at a disadvantage in later life. The other issue identified by representatives from Hondeklip Bay was the lack of sports facilities for the youth. The only sport facility is the rugby field, which has not ablution facilities or change rooms. The cost associated with hiring transport for away games was also raised as an issue.

Potential negative impacts

- Risks to local communities posed by workers;
- Noise, dust and safety impacts associated with mining related activities and the movement of heavy vehicles;
- Risk to abalone operations¹.

The significance of the potential negative impacts associated with risks to local communities and impacts associated with mining operations with mitigation was assessed to be of **Low Negative** significance.

¹ The potential risk to abalone operations along the coast is informed by the findings of the specialist marine assessment undertaken by Capricorn Marine Environmental (July 2016)

Risk to abalone farming operations

The potential risk to abalone and crayfish operations along the coast has been assessed as part of the specialist marine assessment undertaken by Capricorn Marine Environmental (July 2016). The findings of the study indicate that abalone operations in Zone 4 will create 50-60 permanent jobs, including approximately 24 jobs in the hatchery in Port Nolloth. The overall findings of the study indicate that the regional impact of loss of seeded abalone due to mining is considered to be of high intensity in and adjacent to the mining target areas. The impact is rated as **High Negative** without mitigation. The study does note that if mining activities are delayed until after the seeded abalone reach a harvestable size the impact could be avoided.

The creation of permanent employment opportunities should also be viewed within the context of the decline in the fishing sector in Hondeklip Bay and the West Coast in general and the associated high unemployment levels. The creation of 50-60 permanent, long term jobs therefore represents a significant socio-economic benefit for the area and the local community. Likewise the loss of these jobs would also represent a significant negative impact of the local community. The recommendations of the specialist marine assessment undertaken by Capricorn Marine Environmental (October 2016) that mining activities be delayed until the seeded abalone reach a harvestable size is therefore supported by the SIA.

Table 1 summarises the significance of the impacts associated with the operational phase.

Table 1: Summary of social impacts during construction phase

Impact	Significance No Mitigation	Significance With Enhancement / Mitigation
Creation of employment opportunities	Medium (Positive impact)	High (Positive impact)
Creation of training and skills development opportunities	Medium (Positive impact)	High (Positive impact)
Creation of business opportunities	Medium (Positive impact)	High (Positive impact)
Revitalisation of Koingnaas and Kleinzee	High ² (Negative impact)	High (Positive impact)
Support for community initiatives	High	High
Risk to local communities posed by workers	Low (Negative impact)	Low (Negative impact)
Dust, noise and safety impacts associated with mining related activities	Low (Negative impact)	Low (Negative impact)
Impact on abalone farming operations	High (Negative impact)	Medium (Negative impact)

² Assumes that mining does not proceed

CLOSURE AND DECOMMISSIONING

In terms of South Africa the Mineral and Petroleum Resources Development Act, 2002, (Act No 28 of 2002) (MPRDA), the potential impacts associated with closure and decommissioning must be addressed in the SLP. In this regard one of the objectives of the SLP is to provide mine workers with additional skills, save jobs and manage downscaling and/or closure.

In the case of the proposed project, the WCRs employees are aware that the life of mine is 10-15 years. In addition, unlike the previous De Beers operations, employees will not be provided with free housing, services and schooling for children etc. This created a dependency mentality which exacerbated the impact on workers and families when the De Beers operations were closed down.

NO-DEVELOPMENT OPTION

The no-development alternative would result in a lost opportunity to create employment and business opportunities associated with the proposed mining operations. The no-development option would also result lost opportunity to support local community initiatives in the area and act as a catalyst to revitalise the towns of Koingnaas and Kleinzee. The no-development option is therefore not supported.

CONCLUSION AND RECOMMENDATIONS

Conclusions

The findings of the SIA indicate that the Koingnaas-Samsons Bak mining project will create a number of positive social and economic opportunities for the local community and the area as a whole. These include the creation of employment, training and skills development and business opportunities. In addition the mining operations will create opportunities to support local community initiatives and revitalise the towns of Koingnaas and Kleinzee. The proposed project also supports a number of key objectives contained in the NKLM and KLM IDPs, specifically employment creation and economic development. The establishment of the proposed Koingnaas-Samsons Bak mining project is therefore supported by the findings of the SIA.

Recommendations

The following recommendations are made:

- WCRs should seek to increase the number of workers employed from Hondeklip Bay and Soenbatsfontein, specifically given their proximity to the mining area. Likewise, training and skills development opportunities should also be provided for members from these communities to enable them to apply for jobs on the mine;
- As part of its community support programme, WCRs should investigate the opportunity for providing free and or subsidized transport for school children in the area, specifically high school children that attend boarding school. Support for local sports clubs should also be investigated;
- WCRS, in consultation with the NKLM, KLM, Northern Cape Provincial Government and relevant institutions, such as the South African Development Bank, should develop a strategy and plan aimed at promoting the development of Koingnaas and Kleinzee as sustainable, coastal towns;

- The recommendations of the specialist marine assessment undertaken by Capricorn Marine Environmental (October 2016) that mining activities be delayed until the seeded abalone reach a harvestable size is supported by the SIA.

IMPACT STATEMENT

The findings of the SIA indicate that the Koingnaas-Samsons Bak mining project will create a number of positive social and economic opportunities for the local community and the area as a whole. The majority of the employment opportunities are likely to benefit HD members from the community. The findings of the SIA also indicate that all of the potential negative impacts can be effectively mitigated. It is therefore recommended that the proposed Koingnaas-Samsons Bak be supported, subject to the implementation of the recommended enhancement and mitigation measures contained in the SIA report.

ACRONYMS

DEA	Department of Environmental Affairs
DM	District Municipality
HDI	Historically Disadvantaged Individual
EIA	Environmental Impact Assessment
IDP	Integrated Development Plan
KLM	Kamiesberg Local Municipality
LED	Local Economic Development
LM	Local Municipality
NDM	Namakwa District Municipality
NKLM	Nama Khoi Local Municipality
NDP	National Development Plan
NCP	Northern Cape Province
PGDS	Provincial Growth and Development Strategy
PSDF	Provincial Spatial Development Framework
SDF	Spatial Development Framework
SIA	Social Impact Assessment
WCRs	West Coast Resources

TABLE OF CONTENTS

SECTION 1: INTRODUCTION	1
1.1 INTRODUCTION	1
1.2 TERMS OF REFERENCE	3
1.3 PROJECT DESCRIPTION	4
1.3.1 Need and desirability of the proposed activities	4
1.3.2 Current mining operations	5
1.3.3 Proposed new mining operations	6
1.4 PROJECT LOCATION AND SURROUNDING LAND USES	7
1.5 ASSUMPTIONS AND LIMITATIONS	14
1.5.1 Assumptions	14
1.5.2 Limitations	15
1.6 APPROACH TO STUDY	15
1.6.1 Definition of social impacts	15
1.6.2 Timing of social impacts	16
1.7 SPECIALIST DETAILS	16
1.8 DECLARATION OF INDEPENDENCE	16
1.9 REPORT STRUCTURE	17
SECTION 2: POLICY AND PLANNING ENVIRONMENT	18
2.1 INTRODUCTION	18
2.2 NATIONAL POLICY ENVIRONMENT	18
2.1.1 Mining Charter	18
2.1.2 New Growth Path Framework	19
2.3 PROVINCIAL POLICY AND PLANNING ENVIRONMENT	20
2.3.1 Northern Cape Province Provincial Growth and Development Strategy	20
2.3.2 Northern Cape Provincial Spatial Development Framework	23
2.4 DISTRICT AND LOCAL POLICY AND PLANNING ENVIRONMENT	26
2.4.1 Namakwa District Municipality Integrated Development Plan	26
2.4.2 Namakwa District Local Economic Development Strategy	27
2.4.3 Kamiesberg Local Municipality Integrated Development Plan	27
2.4.4 Nama Khoi Local Municipality Integrated Development Plan	28
SECTION 3: OVERVIEW OF STUDY AREA	30
3.1 INTRODUCTION	30
3.2 ADMINISTRATIVE CONTEXT	30
3.3 PROVINCIAL CONTEXT	31
3.4 MUNICIPAL LEVEL DEMOGRAPHIC OVERVIEW	35
3.4.1 Municipal services levels	38
3.4.2 Health service levels	38
3.4.3 Education service levels	38
3.5 MUNICIPAL LEVEL ECONOMIC OVERVIEW	38
SECTION 4: ASSESSEMENT OF KEY SOCIAL ISSUES	40
4.1 INTRODUCTION	40
4.2 POLICY AND PLANNING FIT	40
4.3 SOCIAL IMPACTS ASSOCIATED WITH OPERATIONAL PHASE	41
4.3.1 Creation of employment opportunities	41
4.3.2 Creation of training and skills development opportunities	43
4.3.3 Creation of business opportunities	45
4.3.4 Creation of opportunities to revitalise Koingnaas and Kleinzee	47
4.3.5 Support for community initiatives	48
4.3.6 Risks posed by workers to local communities	51

4.3.7	Impact of mining related activities.....	52
4.3.8	Risk to abalone operations	53
4.4	ASSESSMENT OF DECOMMISSIONING	55
4.5	ASSESSMENT OF NO-DEVELOPMENT OPTION	57
SECTION 5: KEY FINDINGS AND RECOMMENDATIONS		59
5.1	INTRODUCTION	59
5.2	SUMMARY OF KEY FINDINGS	59
5.2.1	Policy and planning issues	59
5.2.2	Operational phase	60
5.2.3	Assessment of closure and decommissioning	63
5.2.4	Assessment of no-development option	63
5.3	CONCLUSIONS AND RECOMMENDATIONS	64
5.4	IMPACT STATEMENT	64
ANNEXURE A: LIST OF SOURCES.....		65
ANNEXURE B: ASSESSMENT METHODOLOGY		66
ANNEXURE C: CV		70
ANNEXURE D: DECLARATION		71