

Integral Laboratories (Pty) Ltd, No. 1 Zandwyk Park, Old Paarl Road (R101), Paarl, 7646

T0417

Tel: 021 871 1109

Fax: 086 635 8874

CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela WTW Raw
Lab Number	S61949

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	4.80	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	0.59	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	27.00	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	2.48	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.90	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	5.47	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:37PM
Total Dissolved Solids	*NSA	mg/L	10.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	12.30	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	Not Done	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela WTW Final
Lab Number	S61950

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	47.40	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	27.97	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	17.10	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.43	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.69	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	6.85	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	1.50	2013/08/21 01:49:37PM
Total Dissolved Solids	*NSA	mg/L	66.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	2.73	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	No Growth	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Town Clinic
Lab Number	S61951

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	52.60	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	37.71	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	10.00	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	22.10	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.33	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	10.70	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.92	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.88	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/08/21 01:49:37PM
Total Dissolved Solids	*NSA	mg/L	85.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	2.35	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	3.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Township Clinic
Lab Number	S61952

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	40.00	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	51.19	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	1.00	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	28.00	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.27	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	13.70	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.38	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.32	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/08/21 01:49:37PM
Total Dissolved Solids	*NSA	mg/L	109.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	1.70	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	1.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Receival at Lab	26/7/2013		

Sample Description	Bela Bela House 1316
Lab Number	S61953

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	108.00	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	104.00	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	1.00	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	48.80	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.16	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	27.30	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.99	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.20	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	0.10	2013/08/21 01:49:37PM
Total Dissolved Solids	*NSA	mg/L	190.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	1.02	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	2.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Jinah Park
Lab Number	S61954

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	46.20	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	55.20	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	29.00	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.13	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	15.00	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.32	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.72	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/08/21 01:49:38PM
Total Dissolved Solids	*NSA	mg/L	112.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	1.97	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	4.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Radium Reservoir
Lab Number	S61955

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	160.00	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	55.70	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	105.00	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.16	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	75.20	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	17.32	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	6.78	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:38PM
Total Dissolved Solids	*NSA	mg/L	406.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	1.92	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	4.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Radium Clinic
Lab Number	S61956

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	244.00	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	56.20	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	108.00	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	76.20	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	10.42	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	6.93	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/08/21 01:49:38PM
Total Dissolved Solids	*NSA	mg/L	418.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	0.90	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	5.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	89.00	2013/08/21 01:35:29PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Pienaar Clinic
Lab Number	S61957

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	56.60	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	50.20	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	27.40	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	0.30	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	12.80	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.50	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.46	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	0.20	2013/08/21 01:49:38PM
Total Dissolved Solids	*NSA	mg/L	106.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	1.27	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	No Growth	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Rapotokwana BH
Lab Number	S61958

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	280.00	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	81.70	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	69.90	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	3.25	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	57.50	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	2.27	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.26	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/08/21 01:49:38PM
Total Dissolved Solids	*NSA	mg/L	272.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	0.53	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	2.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

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Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela WTW BH
Lab Number	S61959

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	169.00	2013/08/01 03:28:41PM
Calcium Hardness	*NSA	mg/L as CaCO ₃	112.00	2013/08/02 11:46:39AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/08/01 03:49:35PM
Conductivity	M4 - Electrical Conductivity	mS/m	52.00	2013/08/02 11:13:48AM
Fluoride	*Merck Test Kit	mg/L	1.33	2013/08/01 04:44:54PM
Iron	*ICP-AES (dissolved - value)	µg/L	33.60	2013/08/02 12:23:06PM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/08/02 12:10:00PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	2.15	2013/08/01 03:43:03PM
Odour	*NSA		No Odour	2013/08/21 01:09:09PM
pH	M6 - pH at 25°C	pH units	7.07	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/08/21 01:49:38PM
Total Dissolved Solids	*NSA	mg/L	202.00	2013/08/01 04:43:02PM
Turbidity	*HACH Turbidity Meter	NTU	1.12	2013/08/01 04:47:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:17:33PM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	1.00	2013/08/21 01:14:01PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/08/21 01:35:29PM

Integral Laboratories (Pty) Ltd, No. 1 Zandwyk Park, Old Paarl Road (R101), Paarl, 7646

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Tel: 021 871 1109

Fax: 086 635 8874

CERTIFICATE OF ANALYSIS

Company Bela Bela Municipality **Service Request Number** SR24422

Customer Address Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480 **Date of Certificate:** 21/8/2013

Contact Person Archie Magana

Date of Sampling 25/7/2013

Date of Reveal at Lab 26/7/2013

Sample Description	Bela Bela WTTW Raw Sewage
Lab Number	S61960

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	57.20	2013/08/01 03:44:39PM
COD - Unfiltered	M2 - COD	mg/L	854.00	2013/08/01 03:26:21PM
Conductivity	M4 - Electrical Conductivity	mS/m	120.00	2013/08/02 11:13:48AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.25	2013/08/01 03:43:03PM
Orthophosphate (PO ₄)	*Merck Test Kit	mg/L	33.50	2013/08/01 03:45:43PM
pH	M6 - pH at 25°C	pH units	7.03	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:38PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	272.00	2013/08/01 04:41:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:17:33PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:44:01PM

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CERTIFICATE OF ANALYSIS

Company Bela Bela Municipality **Service Request Number** SR24422

Customer Address Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480 **Date of Certificate:** 21/8/2013

Contact Person Archie Magana

Date of Sampling 25/7/2013

Date of Reveal at Lab 26/7/2013

Sample Description	Bela Bela WTTW Final Sewage
Lab Number	S61961

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	34.70	2013/08/01 03:44:39PM
COD - Unfiltered	M2 - COD	mg/L	110.00	2013/08/01 03:26:21PM
Conductivity	M4 - Electrical Conductivity	mS/m	85.20	2013/08/02 11:13:48AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	8.94	2013/08/01 03:43:03PM
Orthophosphate (PO ₄)	*Merck Test Kit	mg/L	40.60	2013/08/01 03:45:43PM
pH	M6 - pH at 25°C	pH units	7.01	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:38PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	8.00	2013/08/01 04:41:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	2 420.00	2013/08/21 01:17:33PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	2 420.00	2013/08/21 01:11:26PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Radium Raw Sewage
Lab Number	S61962

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	57.10	2013/08/01 03:44:39PM
COD - Unfiltered	M2 - COD	mg/L	562.00	2013/08/01 03:26:21PM
Conductivity	M4 - Electrical Conductivity	mS/m	168.00	2013/08/02 11:13:48AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	2.20	2013/08/01 03:43:03PM
Orthophosphate (PO ₄)	*Merck Test Kit	mg/L	29.20	2013/08/01 03:45:43PM
pH	M6 - pH at 25°C	pH units	7.53	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:38PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	428.00	2013/08/01 04:41:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:17:33PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:35:29PM

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CERTIFICATE OF ANALYSIS

Company Bela Bela Municipality **Service Request Number** SR24422

Customer Address Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480 **Date of Certificate:** 21/8/2013

Contact Person Archie Magana

Date of Sampling 25/7/2013

Date of Reveal at Lab 26/7/2013

Sample Description	Bela Bela Radium Final Sewage
Lab Number	S61963

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	45.20	2013/08/01 03:44:39PM
COD - Unfiltered	M2 - COD	mg/L	82.00	2013/08/01 03:26:21PM
Conductivity	M4 - Electrical Conductivity	mS/m	159.00	2013/08/02 11:13:48AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.02	2013/08/01 03:43:03PM
Orthophosphate (PO ₄)	*Merck Test Kit	mg/L	18.00	2013/08/01 03:45:43PM
pH	M6 - pH at 25°C	pH units	7.74	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:38PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	74.00	2013/08/01 04:41:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	2 420.00	2013/08/21 01:17:33PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	2 420.00	2013/08/21 01:35:29PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Sample Description	Bela Bela Pienaar Final Sewage
Lab Number	S61964

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	54.70	2013/08/01 03:44:39PM
COD - Unfiltered	M2 - COD	mg/L	470.00	2013/08/01 03:26:21PM
Conductivity	M4 - Electrical Conductivity	mS/m	127.00	2013/08/02 11:13:48AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	2.13	2013/08/01 03:43:03PM
Orthophosphate (PO ₄)	*Merck Test Kit	mg/L	23.90	2013/08/01 03:45:43PM
pH	M6 - pH at 25°C	pH units	8.08	2013/08/01 03:33:09PM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/08/21 01:49:38PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	258.00	2013/08/01 04:41:20PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:17:33PM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/08/21 01:35:29PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR24422
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	21/8/2013
Contact Person	Archie Magana		
Date of Sampling	25/7/2013		
Date of Reveal at Lab	26/7/2013		

Authorised By:**(Signature/s authorised signatories)****N Africa****S Salie****All results have been reviewed and authorised by a technical signatory**

1. Sampling is outside the laboratory's scope of accreditation, where applicable free and total chlorine results are supplied by the sampling officer.
2. This report shall not be reproduced except in full, without written approval from the laboratory.
3. Results reflected on this report relate only to the items as received and analysed.
4. Uncertainty of measurement for accredited analysis will be provided on request
5. Reports can be emailed, but the laboratory will not be responsible for changes to emailed reports.
6. Parameters indicated by an * are not accredited.
7. Parameters indicated by ** are outsourced.
8. ICP results reported as 'Dissolved' - sample has been filtered using a 0.45 µm filter.
9. The following abbreviations are applicable:
 - NS - Not Settling
 - ND -Not Detected
 - NG - No Growth
10. Where applicable, limits reflected are based on SANS 241-2011 and General Effluent Standards.
11. Time stamps reflect time of analysis completion and final capturing of analytical results.

Certificate Number: SR24422**Ammended: Y/N**