CITY OF HOUSTON

Administration and Regulatory Affairs Department
Strategic Purchasing Division

Bill White
Mayor

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City Purchasing Agent
P.O. Box 1562
Houston, Texas 77251-1562

F. 832.393.8755
https://purchasing.houstontx.gov

August 25, 2009

Subject: Letter of Clarification No. 1
Fertilizers, Herbicides, Insecticides and Non-Ionic
Surfactant for the Houston Airport System

Reference: Invitation to Bid (ITB) No.: S49-S23375

To All Prospective Suppliers:

This Letter of Clarification is issued for the following reason:

To revise the above referenced solicitation as follows:

- An attachment is being included consisting of 13 pages and is titled "Soil Analysis Report".
  Note: "Copies of Soil Analysis Reports have been provided for informational purposes only."

This Letter of Clarification will be considered part of the solicitation referenced above.

Furthermore, it is the responsibility of each Supplier to obtain any previous Letter(s) of Clarification associated with this solicitation.

Norbert Aguilar
Procurement Specialist
Strategic Purchasing Division
832-393-8788

NR
NA:DRH:na
Attachment: Soil Analysis Report

AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
345 Heep Center, 2474 TAMU
College Station, TX 77843-2474
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258984
Customer Sample ID: North Complex East 1
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	5.8	(5.8)	-	Mod. Acid	
Conductivity	62	(-)	umho/cm	None	
Nitrate-N	1	(-)	ppm		95 lbs N/acre
Phosphorus	2	(50)	ppm		115 lbs P2O5/acre
Potassium	19	(150)	ppm		215 lbs K20/acre
Calcium	542	(180)	ppm		0 lbs Ca/acre
Magnesium	92	(50)	ppm		0 lbs Mg/acre
Sulfur	15	(13)	ppm		0 lbs S/acre
Sodium	165	(-)	ppm		
Iron	18.94	(4.25)	ppm		
Zinc	0.17	(0.81)	ppm		6 lbs Zn/acre
Manganese	0.53	(1.00)	ppm		1 lbs Mn/acre
Copper	0.20	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					1.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Limestone recommendations are based on 100 ECCE liming products. Limestone applications >3 tons/acre should be made >4 months prior to crop establishment to lessen micro-nutrient availability issues.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258985
Customer Sample ID: North Complex East 2
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	5.4	(5.8)	-	Mod. Acid	
Conductivity	79	(-)	umho/cm	None	
Nitrate-N	3	(-)	ppm		90 lbs N/acre
Phosphorus	3	(50)	ppm		115 lbs P2O5/acre
Potassium	35	(150)	ppm		190 lbs K20/acre
Calcium	633	(180)	ppm		0 lbs Ca/acre
Magnesium	146	(50)	ppm		0 lbs Mg/acre
Sulfur	19	(13)	ppm		0 lbs S/acre
Sodium	230	(-)	ppm		
Iron	13.01	(4.25)	ppm		
Zinc	0.15	(0.81)	ppm		6 lbs Zn/acre
Manganese	0.43	(1.00)	ppm		2 lbs Mn/acre
Copper	0.20	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					1.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Limestone recommendations are based on 100 ECCE liming products. Limestone applications >3 tons/acre should be made >4 months prior to crop establishment to lessen micro-nutrient availability issues.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysis Ver. 2.18

AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
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College Station, TX 77843-2474
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Visit our website: http://soiltesting.tamu.edu

Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258986
Customer Sample ID: North Complex West 1
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	Fertilizer Recommended
pH	5.1	(5.8)	-	Strongly Acid							
Conductivity	45	(-)	umho/cm	None				CL*			
Nitrate-N	4	(-)	ppm								90 lbs N/acre
Phosphorus	5	(50)	ppm								110 lbs P2O5/acre
Potassium	25	(150)	ppm								205 lbs K20/acre
Calcium	346	(180)	ppm								0 lbs Ca/acre
Magnesium	64	(50)	ppm								0 lbs Mg/acre
Sulfur	14	(13)	ppm								0 lbs S/acre
Sodium	146	(-)	ppm								
Iron	7.12	(4.25)	ppm								
Zinc	0.24	(0.81)	ppm								6 lbs Zn/acre
Manganese	0.75	(1.00)	ppm								1 lbs Mn/acre
Copper	0.12	(0.16)	ppm								0.5 lbs Cu/acre
Boron											
Limestone Requirement											1.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Limestone recommendations are based on 100 ECCE liming products. Limestone applications >3 tons/acre should be made >4 months prior to crop establishment to lessen micro-nutrient availability issues.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Copper: Limited supporting research data is currently available.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

ProAnalysisVer 2.18

AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258987
Customer Sample ID: North Complex West 2
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	7.5	(5.8)	-	Slightly Alkaline	
Conductivity	120	(-)	umho/cm	None	
Nitrate-N	1	(-)	ppm		95 lbs N/acre
Phosphorus	4	(50)	ppm		115 lbs P2O5/acre
Potassium	37	(150)	ppm		185 lbs K20/acre
Calcium	1,351	(180)	ppm		0 lbs Ca/acre
Magnesium	165	(50)	ppm		0 lbs Mg/acre
Sulfur	23	(13)	ppm		0 lbs S/acre
Sodium	206	(-)	ppm		
Iron	5.63	(4.25)	ppm		
Zinc	0.20	(0.81)	ppm		6 lbs Zn/acre
Manganese	0.70	(1.00)	ppm		1 lbs Mn/acre
Copper	0.20	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

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979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258988
Customer Sample ID: South Complex East
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Med	High	VHigh	Excess.	Fertilizer Recommended
pH	5.9	(5.8)	-	Mod. Acid							
Conductivity	65	(-)	umho/cm	None				CL*			
Nitrate-N	3	(-)	ppm								90 lbs N/acre
Phosphorus	7	(50)	ppm								105 lbs P2O5/acre
Potassium	18	(150)	ppm								215 lbs K20/acre
Calcium	936	(180)	ppm								0 lbs Ca/acre
Magnesium	100	(50)	ppm								0 lbs Mg/acre
Sulfur	12	(13)	ppm								5 lbs S/acre
Sodium	157	(-)	ppm								
Iron	16.44	(4.25)	ppm								
Zinc	0.23	(0.81)	ppm								6 lbs Zn/acre
Manganese	1.52	(1.00)	ppm								0 lbs Mn/acre
Copper	0.24	(0.16)	ppm								0 lbs Cu/acre
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.
Sulfur: Available sulfur may be found deeper in soil profile, thus limiting any response to added sulfur.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

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Soil Analysis Report

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979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258989
Customer Sample ID: South Complex West
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	7.4	(5.8)	-	Slightly Alkaline	
Conductivity	150	(-)	umho/cm	None	
Nitrate-N	1	(-)	ppm		95 lbs N/acre
Phosphorus	13	(50)	ppm		90 lbs P2O5/acre
Potassium	29	(150)	ppm		200 lbs K20/acre
Calcium	2,177	(180)	ppm		0 lbs Ca/acre
Magnesium	132	(50)	ppm		0 lbs Mg/acre
Sulfur	16	(13)	ppm		0 lbs S/acre
Sodium	133	(-)	ppm		
Iron	8.35	(4.25)	ppm		
Zinc	0.63	(0.81)	ppm		2 lbs Zn/acre
Manganese	3.14	(1.00)	ppm		0 lbs Mn/acre
Copper	0.35	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP

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AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
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College Station, TX 77843-2474
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Visit our website: http://soiltesting.tamu.edu

Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258990
Customer Sample ID: South Complex Middle
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Med High VHigh Excess.	Fertilizer Recommended
pH	7.4	(5.8)	-	Slightly Alkaline	
Conductivity	139	(-)	umho/cm	None	
Nitrate-N	2	(-)	ppm		95 lbs N/acre
Phosphorus	9	(50)	ppm		100 lbs P2O5/acre
Potassium	33	(150)	ppm		190 lbs K20/acre
Calcium	1,972	(180)	ppm		0 lbs Ca/acre
Magnesium	103	(50)	ppm		0 lbs Mg/acre
Sulfur	13	(13)	ppm		0 lbs S/acre
Sodium	131	(-)	ppm		
Iron	8.52	(4.25)	ppm		
Zinc	0.44	(0.81)	ppm		4 lbs Zn/acre
Manganese	1.60	(1.00)	ppm		0 lbs Mn/acre
Copper	0.33	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

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AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258991
Customer Sample ID: N. Lee Rd West Field
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	Fertilizer Recommended
pH	8.2	(5.8)	-	Mod. Alkaline							
Conductivity	231	(-)	umho/cm	None				CL*			
Nitrate-N	6	(-)	ppm								85 lbs N/acre
Phosphorus	6	(50)	ppm								110 lbs P2O5/acre
Potassium	34	(150)	ppm								190 lbs K20/acre
Calcium	2,602	(180)	ppm								0 lbs Ca/acre
Magnesium	289	(50)	ppm								0 lbs Mg/acre
Sulfur	20	(13)	ppm								0 lbs S/acre
Sodium	195	(-)	ppm								
Iron	5.71	(4.25)	ppm								
Zinc	0.17	(0.81)	ppm								6 lbs Zn/acre
Manganese	0.48	(1.00)	ppm								2 lbs Mn/acre
Copper	0.21	(0.16)	ppm								0 lbs Cu/acre
Boron											
Limestone Requirement											0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

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AgriLIFE EXTENSION
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Soil Analysis Report

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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258992
Customer Sample ID: N. Lee Rd Equine TR East
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Med High VHigh Excess.	Fertilizer Recommended
pH	8.2	(5.8)	-	Mod. Alkaline	
Conductivity	158	(-)	umho/cm	None	
Nitrate-N	3	(-)	ppm		90 lbs N/acre
Phosphorus	4	(50)	ppm		115 lbs P2O5/acre
Potassium	72	(150)	ppm		125 lbs K20/acre
Calcium	3,866	(180)	ppm		0 lbs Ca/acre
Magnesium	186	(50)	ppm		0 lbs Mg/acre
Sulfur	14	(13)	ppm		0 lbs S/acre
Sodium	152	(-)	ppm		
Iron	5.39	(4.25)	ppm		
Zinc	0.20	(0.81)	ppm		6 lbs Zn/acre
Manganese	1.55	(1.00)	ppm		0 lbs Mn/acre
Copper	0.26	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

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Soil Analysis Report

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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258993
Customer Sample ID: N. Lee Rd Fenee Lot East
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	7.8	(5.8)	-	Mod. Alkaline	
Conductivity	137	(-)	umho/cm	None CL*	
Nitrate-N	1	(-)	ppm		95 lbs N/acre
Phosphorus	6	(50)	ppm		110 lbs P2O5/acre
Potassium	41	(150)	ppm		180 lbs K20/acre
Calcium	2,505	(180)	ppm		0 lbs Ca/acre
Magnesium	240	(50)	ppm		0 lbs Mg/acre
Sulfur	18	(13)	ppm		0 lbs S/acre
Sodium	168	(-)	ppm		
Iron	4.82	(4.25)	ppm		
Zinc	0.23	(0.81)	ppm		6 lbs Zn/acre
Manganese	0.85	(1.00)	ppm		1 lbs Mn/acre
Copper	0.17	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258994
Customer Sample ID: Tifton Field 1960
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	6.9	(5.8)	-	Slightly Acid	
Conductivity	141	(-)	umho/cm	None	
Nitrate-N	2	(-)	ppm		95 lbs N/acre
Phosphorus	8	(50)	ppm		105 lbs P2O5/acre
Potassium	27	(150)	ppm		205 lbs K20/acre
Calcium	1,132	(180)	ppm		0 lbs Ca/acre
Magnesium	137	(50)	ppm		0 lbs Mg/acre
Sulfur	16	(13)	ppm		0 lbs S/acre
Sodium	180	(-)	ppm		
Iron	12.88	(4.25)	ppm		
Zinc	0.47	(0.81)	ppm		4 lbs Zn/acre
Manganese	6.04	(1.00)	ppm		0 lbs Mn/acre
Copper	0.34	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

PreAnalysisVer 2.18

AgriLIFE EXTENSION
Texas A&M System

Soil Analysis Report

Soil, Water and Forage Testing Laboratory
Department of Soil and Crop Sciences
345 Heep Center, 2474 TAMU
College Station, TX 77843-2474
979-845-4816 (phone)
979-845-5958 (FAX)
Visit our website: http://soiltesting.tamu.edu

Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258995
Customer Sample ID: 1960 Field N V56
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	7.4	(5.8)	-	Slightly Alkaline	
Conductivity	114	(-)	umho/cm	None CL*	
Nitrate-N	3	(-)	ppm		90 lbs N/acre
Phosphorus	5	(50)	ppm		110 lbs P2O5/acre
Potassium	30	(150)	ppm		200 lbs K20/acre
Calcium	1,430	(180)	ppm		0 lbs Ca/acre
Magnesium	165	(50)	ppm		0 lbs Mg/acre
Sulfur	13	(13)	ppm		5 lbs S/acre
Sodium	165	(-)	ppm		
Iron	9.89	(4.25)	ppm		
Zinc	0.50	(0.81)	ppm		4 lbs Zn/acre
Manganese	3.43	(1.00)	ppm		0 lbs Mn/acre
Copper	0.33	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.
Sulfur: Available sulfur may be found deeper in soil profile, thus limiting any response to added sulfur.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.; P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

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Soil Analysis Report

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979-845-4816 (phone)
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Report generated for:
Casundra Washington
4500 Will Clayton
Houston, TX 77032

Sample received on: 12/12/2008
Printed on: 12/16/2008
Area Represented: not provided

Harris County
Laboratory Number: 258996
Customer Sample ID: Chanute Rd Field
Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS (3 HAY CUTTINGS-2 TONS/A AVG.)

Analysis	Results	CL*	Units	ExLow VLow Low Mod High VHigh Excess.	Fertilizer Recommended
pH	8.2	(5.8)	-	Mod. Alkaline	
Conductivity	150	(-)	umho/cm	None CL*	
Nitrate-N	3	(-)	ppm		90 lbs N/acre
Phosphorus	8	(50)	ppm		100 lbs P2O5/acre
Potassium	27	(150)	ppm		200 lbs K20/acre
Calcium	6,210	(180)	ppm		0 lbs Ca/acre
Magnesium	113	(50)	ppm		0 lbs Mg/acre
Sulfur	30	(13)	ppm		0 lbs S/acre
Sodium	140	(-)	ppm		
Iron	4.52	(4.25)	ppm		
Zinc	0.18	(0.81)	ppm		6 lbs Zn/acre
Manganese	2.07	(1.00)	ppm		0 lbs Mn/acre
Copper	0.28	(0.16)	ppm		0 lbs Cu/acre
Boron					
Limestone Requirement					0.00 tons 100ECCE/acre

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended.

Nitrogen Apply an additional 100 lbs/A of nitrogen for each subsequent hay cuttings.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

Zinc: Zinc recommendation is based on single broadcast application each 2-3 years.

Methods: pH and conductivity/ 2:1; nitrate-N/Cd-red.: P, K, Ca, Mg, Na, and S/Mehlich 3 by ICP; Fe, Zn, Mn, and Cu/DTPA by ICP; and B/hot water by ICP.

PreAnalysisVer 2.18