



# Mosaic Fertilizer, L.L.C.

## Environmental Lab



NELAP Certification #  
E 84578

### ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAP STANDARDS

Work Order Number: S109162

Client: DeSoto County

Project Name: DeSoto County - Split Sampling

Date Received: 09/21/2021

Time Received: 14:10

Lab ID: S109162-01 (Water)      Sample Description: LSM-002  
 Date Sampled: 09/21/2021      Sample Method: Grab  
 Time Sampled: 10:15      Source ID: 007002

Parameter	Result	Error	Qualifier	Units	MDL	PQL	Procedure	Analysis		Analyst
								Date	Time	
Chlorophyll a	16.2			ug/L	0.14	0.56	EPA 445	09/27/2021	08:51	DJ
Fluoride	1.18			mg/L	0.0500	0.200	EPA 300.0	09/24/2021	03:33	AC
Nitrate-Nitrite	0.196			mg/L	0.0100	0.0380	EPA 353.2	09/29/2021	00:00	KW
Phosphorus, Total	0.507			mg/L	0.0100	0.0400	EPA 365.4	09/30/2021	12:29	KW
Residue-fixed	3.80			mg/L	1.00	1.00	EPA 160.4	09/22/2021	07:02	DJ
Residue-nonfilterable (TSS)	6.40			mg/L	1.00	1.00	SM 2540 D	09/22/2021	07:02	DJ
Sulfate	75.0			mg/L	0.400	1.60	EPA 300.0	09/24/2021	03:33	AC
Total Kjeldahl Nitrogen	0.872			mg/L	0.100	0.400	EPA 351.2	09/30/2021	12:29	KW
Total N	1.07			mg/L	0.110	0.438	TKN + Total nitrate-nitrite	09/30/2021	12:29	KW
Dissolved Oxygen Saturation	61.4			per cent			FT 1500	09/21/2021	10:15	KC
Flow Rate	24.6			MGD			FT 1800	09/21/2021	10:15	KC
pH	7.79			SU			FT 1100	09/21/2021	10:15	KC
Specific Conductance	420			umhos/cm			FT 1200	09/21/2021	10:15	KC
Staff Gauge	1.10			feet			Calculated	09/21/2021	10:15	KC
Water Temperature	28.4			°C			FT 1400	09/21/2021	10:15	KC
Turbidity	6.18			NTU			FT 1600	09/21/2021	10:15	KC
Gross-Alpha	6.4	+/- 2.1		pCi/L	1.4	1.4	EPA 900.0	09/30/2021	06:34	FRS
Arsenic	4.17			UG/L	0.689	2.756	SM 3113 B	09/24/2021	14:30	Bench
Oil and Grease	3.67		I	MG/L	1.37	5.48	EPA 1664A	09/28/2021	09:25	Bench



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#### Wet Chemistry - Quality Control

Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109235 - DEFAULT PREP Wet Chem</b>											
<b>Blank (B109235-BLK1)</b>				Prepared & Analyzed: 09/22/21							
Residue-nonfilterable (TSS)	1.00	U	mg/L	1.00	1.00						
<b>LCS (B109235-BS1)</b>				Prepared & Analyzed: 09/22/21							
Residue-nonfilterable (TSS)	48.0		mg/L	1.00	1.00	46.2		104	90-110		
<b>Duplicate (B109235-DUP1)</b>				Source: S109140-01				Prepared & Analyzed: 09/22/21			
Residue-nonfilterable (TSS)	4.60		mg/L	1.00	1.00		4.60			0.00	5
<b>Duplicate (B109235-DUP2)</b>				Source: S109157-01				Prepared & Analyzed: 09/22/21			
Residue-nonfilterable (TSS)	7.60	J-2	mg/L	1.00	1.00		5.20			37.5	5
<b>Batch B109236 - DEFAULT PREP Wet Chem</b>											
<b>Blank (B109236-BLK1)</b>				Prepared & Analyzed: 09/22/21							
Residue-fixed	1.00	U	mg/L	1.00	1.00						
<b>Duplicate (B109236-DUP1)</b>				Source: S109140-01				Prepared & Analyzed: 09/22/21			
Residue-fixed	3.00	J-2	mg/L	1.00	1.00		2.40			22.2	5
<b>Duplicate (B109236-DUP2)</b>				Source: S109158-01				Prepared & Analyzed: 09/22/21			
Residue-fixed	4.20	J-2	mg/L	1.00	1.00		4.80			13.3	5
<b>Batch B109258 - Anion Prep</b>											
<b>Blank (B109258-BLK1)</b>				Prepared & Analyzed: 09/23/21							
Fluoride	0.0500	U	mg/L	0.0500	0.200						
Sulfate	0.400	U	mg/L	0.400	1.60						



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Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109258 - Anion Prep</b>											
<b>Blank (B109258-BLK2)</b>											
						Prepared & Analyzed: 09/24/21					
Fluoride	0.0500	U	mg/L	0.0500	0.200						
Sulfate	0.400	U	mg/L	0.400	1.60						
<b>LCS (B109258-BS1)</b>											
						Prepared & Analyzed: 09/23/21					
Sulfate	5.03		mg/L	0.400	1.60	5.00		101	90-110		
Fluoride	0.510		mg/L	0.0500	0.200	0.500		102	90-110		
<b>LCS (B109258-BS2)</b>											
						Prepared & Analyzed: 09/24/21					
Sulfate	5.37		mg/L	0.400	1.60	5.00		107	90-110		
Fluoride	0.544		mg/L	0.0500	0.200	0.500		109	90-110		
<b>Duplicate (B109258-DUP1)</b>											
				<b>Source: S109144-02</b>		Prepared & Analyzed: 09/23/21					
Sulfate	0.400	U	mg/L	0.400	1.60		U				20
Fluoride	1.69		mg/L	0.0500	0.200		1.68			0.379	20
<b>Duplicate (B109258-DUP2)</b>											
				<b>Source: S109144-05</b>		Prepared & Analyzed: 09/23/21					
Sulfate	2.03		mg/L	0.400	1.60		2.04			0.478	20
Fluoride	0.502		mg/L	0.0500	0.200		0.504			0.397	20
<b>Duplicate (B109258-DUP3)</b>											
				<b>Source: S109166-01</b>		Prepared & Analyzed: 09/24/21					
Sulfate	5.63		mg/L	0.400	1.60		5.64			0.334	20
Fluoride	1.03		mg/L	0.0500	0.200		1.03			0.166	20
<b>Matrix Spike (B109258-MS1)</b>											
				<b>Source: S109144-02</b>		Prepared & Analyzed: 09/23/21					
Sulfate	5.11		mg/L	0.400	1.60	5.00	U	102	90-110		
Fluoride	2.17		mg/L	0.0500	0.200	0.500	1.68	96.3	90-110		
<b>Matrix Spike (B109258-MS2)</b>											
				<b>Source: S109144-05</b>		Prepared & Analyzed: 09/23/21					
Fluoride	1.03		mg/L	0.0500	0.200	0.500	0.504	106	90-110		
Sulfate	7.19		mg/L	0.400	1.60	5.00	2.04	103	90-110		



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Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109258 - Anion Prep</b>											
<b>Matrix Spike (B109258-MS3)</b>			<b>Source: S109166-01</b>			<b>Prepared &amp; Analyzed: 09/24/21</b>					
Sulfate	10.8		mg/L	0.400	1.60	5.00	5.64	104	90-110		
Fluoride	1.56		mg/L	0.0500	0.200	0.500	1.03	106	90-110		
<b>Reference (B109258-SRM1)</b>			<b>Prepared &amp; Analyzed: 09/23/21</b>								
Fluoride	9.71		mg/L	0.0500	0.200	10.0		97.1	90-110		
Sulfate	93.3		mg/L	0.400	1.60	100		93.3	90-110		
<b>Reference (B109258-SRM2)</b>			<b>Prepared &amp; Analyzed: 09/23/21</b>								
Sulfate	9.80		mg/L	0.400	1.60	10.0		98.0	90-110		
Fluoride	1.01		mg/L	0.0500	0.200	1.00		101	90-110		
<b>Batch B109265 - DEFAULT PREP Wet Chem</b>											
<b>Blank (B109265-BLK1)</b>			<b>Prepared: 09/23/21 Analyzed: 09/27/21</b>								
Chlorophyll a	0.14	U	ug/L	0.14	0.56						
<b>LCS (B109265-BS1)</b>			<b>Prepared: 09/24/21 Analyzed: 09/27/21</b>								
Chlorophyll a	61.3		ug/L	0.14	0.56	58.7		104	90-110		
<b>Duplicate (B109265-DUP1)</b>			<b>Source: S109133-04</b>			<b>Prepared: 09/16/21 Analyzed: 09/27/21</b>					
Chlorophyll a	5.10		ug/L	0.14	0.56		5.12			0.391	30
<b>Batch B109286 - Nutrient Prep</b>											
<b>Blank (B109286-BLK1)</b>			<b>Prepared &amp; Analyzed: 09/30/21</b>								
Total Kjeldahl Nitrogen	0.100	U	mg/L	0.100	0.400						
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400						



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Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109286 - Nutrient Prep</b>											
<b>Blank (B109286-BLK2)</b>						Prepared & Analyzed: 10/01/21					
Total Kjeldahl Nitrogen	0.100	U	mg/L	0.100	0.400						
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400						
<b>Blank (B109286-BLK3)</b>						Prepared & Analyzed: 10/01/21					
Total Kjeldahl Nitrogen	0.100	U	mg/L	0.100	0.400						
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400						
<b>Blank (B109286-BLK4)</b>						Prepared & Analyzed: 10/01/21					
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400						
Total Kjeldahl Nitrogen	0.100	U	mg/L	0.100	0.400						
<b>LCS (B109286-BS1)</b>						Prepared & Analyzed: 09/30/21					
Phosphorus, Total	2.02		mg/L	0.0100	0.0400	2.00		101	90-110		
Total Kjeldahl Nitrogen	1.89		mg/L	0.100	0.400	2.00		94.4	90-110		
<b>LCS (B109286-BS2)</b>						Prepared & Analyzed: 10/01/21					
Phosphorus, Total	2.01		mg/L	0.0100	0.0400	2.00		100	90-110		
Total Kjeldahl Nitrogen	1.96		mg/L	0.100	0.400	2.00		97.8	90-110		
<b>LCS (B109286-BS3)</b>						Prepared & Analyzed: 10/01/21					
Total Kjeldahl Nitrogen	1.96		mg/L	0.100	0.400	2.00		97.8	90-110		
Phosphorus, Total	2.02		mg/L	0.0100	0.0400	2.00		101	90-110		
<b>LCS (B109286-BS4)</b>						Prepared & Analyzed: 10/01/21					
Phosphorus, Total	2.02		mg/L	0.0100	0.0400	2.00		101	90-110		
Total Kjeldahl Nitrogen	1.87		mg/L	0.100	0.400	2.00		93.6	90-110		
<b>Duplicate (B109286-DUP1)</b>			<b>Source: S109153-01</b>			Prepared & Analyzed: 09/30/21					
Total Kjeldahl Nitrogen	0.984		mg/L	0.100	0.400		1.01			2.21	30
Phosphorus, Total	1.12		mg/L	0.0100	0.0400		1.12			0.0896	30



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#### Wet Chemistry - Quality Control

Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109286 - Nutrient Prep</b>											
<b>Duplicate (B109286-DUP2)</b>			<b>Source: S109165-01</b>			<b>Prepared &amp; Analyzed: 09/30/21</b>					
Total Kjeldahl Nitrogen	0.250	I, J-3	mg/L	0.100	0.400		0.273			8.80	30
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400		U				30
<b>Duplicate (B109286-DUP3)</b>			<b>Source: S109173-01</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>					
Total Kjeldahl Nitrogen	0.368	I	mg/L	0.100	0.400		0.400			8.33	30
Phosphorus, Total	0.230		mg/L	0.0100	0.0400		0.230			0.00	30
<b>Duplicate (B109286-DUP4)</b>			<b>Source: S109176-05</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>					
Phosphorus, Total	0.804		mg/L	0.0100	0.0400		0.802			0.249	30
Total Kjeldahl Nitrogen	1.25	J-3	mg/L	0.100	0.400		1.29			3.38	30
<b>Duplicate (B109286-DUP5)</b>			<b>Source: S109184-01</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>					
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400		U				30
Total Kjeldahl Nitrogen	0.394	I, J-3	mg/L	0.100	0.400		0.354			10.7	30
<b>Duplicate (B109286-DUP6)</b>			<b>Source: S109192-04</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>					
Phosphorus, Total	0.0100	U	mg/L	0.0100	0.0400		U				30
Total Kjeldahl Nitrogen	0.224	I, J-3	mg/L	0.100	0.400		0.232			3.51	30
<b>Duplicate (B109286-DUP7)</b>			<b>Source: S109193-14</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>					
Phosphorus, Total	0.805		mg/L	0.0100	0.0400		0.802			0.373	30
Total Kjeldahl Nitrogen	0.766		mg/L	0.100	0.400		0.789			2.96	30
<b>Duplicate (B109286-DUP8)</b>			<b>Source: S109196-07</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>					
Phosphorus, Total	0.684		mg/L	0.0100	0.0400		0.693			1.31	30
Total Kjeldahl Nitrogen	1.04	J-3	mg/L	0.100	0.400		1.08			3.20	30
<b>Matrix Spike (B109286-MS1)</b>			<b>Source: S109153-01</b>			<b>Prepared &amp; Analyzed: 09/30/21</b>					
Phosphorus, Total	2.04		mg/L	0.0100	0.0400	1.00	1.12	92.0	90-110		
Total Kjeldahl Nitrogen	2.03		mg/L	0.100	0.400	1.00	1.01	102	90-110		



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#### Wet Chemistry - Quality Control

Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
<b>Batch B109286 - Nutrient Prep</b>												
<b>Matrix Spike (B109286-MS2)</b>			<b>Source: S109165-01</b>			<b>Prepared &amp; Analyzed: 09/30/21</b>						
Phosphorus, Total	1.00		mg/L	0.0100	0.0400	1.00	U	100	90-110			
Total Kjeldahl Nitrogen	1.13	J-3	mg/L	0.100	0.400	1.00	0.273	85.9	90-110			
<b>Matrix Spike (B109286-MS3)</b>			<b>Source: S109173-01</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>						
Phosphorus, Total	1.21		mg/L	0.0100	0.0400	1.00	0.230	98.2	90-110			
Total Kjeldahl Nitrogen	1.32		mg/L	0.100	0.400	1.00	0.400	92.1	90-110			
<b>Matrix Spike (B109286-MS4)</b>			<b>Source: S109176-05</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>						
Phosphorus, Total	1.75		mg/L	0.0100	0.0400	1.00	0.802	94.6	90-110			
Total Kjeldahl Nitrogen	1.96	J-3	mg/L	0.100	0.400	1.00	1.29	67.1	90-110			
<b>Matrix Spike (B109286-MS5)</b>			<b>Source: S109184-01</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>						
Total Kjeldahl Nitrogen	1.15	J-3	mg/L	0.100	0.400	1.00	0.354	79.8	90-110			
Phosphorus, Total	0.986		mg/L	0.0100	0.0400	1.00	U	98.6	90-110			
<b>Matrix Spike (B109286-MS6)</b>			<b>Source: S109192-04</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>						
Total Kjeldahl Nitrogen	1.11	J-3	mg/L	0.100	0.400	1.00	0.232	88.2	90-110			
Phosphorus, Total	1.00		mg/L	0.0100	0.0400	1.00	U	100	90-110			
<b>Matrix Spike (B109286-MS7)</b>			<b>Source: S109193-14</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>						
Phosphorus, Total	1.80		mg/L	0.0100	0.0400	1.00	0.802	99.5	90-110			
Total Kjeldahl Nitrogen	1.87		mg/L	0.100	0.400	1.00	0.789	108	90-110			
<b>Matrix Spike (B109286-MS8)</b>			<b>Source: S109196-07</b>			<b>Prepared &amp; Analyzed: 10/01/21</b>						
Phosphorus, Total	1.74		mg/L	0.0100	0.0400	1.00	0.693	104	90-110			
Total Kjeldahl Nitrogen	2.62	J-3	mg/L	0.100	0.400	1.00	1.08	154	90-110			
<b>Reference (B109286-SRM1)</b>			<b>Prepared &amp; Analyzed: 09/30/21</b>									
Phosphorus, Total	1.94		mg/L	0.0100	0.0400	2.00		96.8	90-110			
Total Kjeldahl Nitrogen	1.88		mg/L	0.100	0.400	2.00		94.2	90-110			



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Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109287 - Nutrient Prep</b>											
<b>Blank (B109287-BLK1)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.0100	U	mg/L	0.0100	0.0380						
<b>Blank (B109287-BLK2)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.0100	U	mg/L	0.0100	0.0380						
<b>Blank (B109287-BLK3)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.0100	U	mg/L	0.0100	0.0380						
<b>Blank (B109287-BLK4)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.0100	U	mg/L	0.0100	0.0380						
<b>LCS (B109287-BS1)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	1.07		mg/L	0.0100	0.0380	1.00		107	90-110		
<b>LCS (B109287-BS2)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.998		mg/L	0.0100	0.0380	1.00		99.8	90-110		
<b>LCS (B109287-BS3)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.987		mg/L	0.0100	0.0380	1.00		98.7	90-110		
<b>LCS (B109287-BS4)</b>											
Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.967		mg/L	0.0100	0.0380	1.00		96.7	90-110		
<b>Duplicate (B109287-DUP1)</b>											
Source: S109167-04 Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.0770		mg/L	0.0100	0.0380		0.0740			3.97	30
<b>Duplicate (B109287-DUP2)</b>											
Source: S109168-02 Prepared & Analyzed: 09/29/21											
Nitrate-Nitrite	0.537		mg/L	0.0100	0.0380		0.535			0.373	30





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<b>Batch B109287 - Nutrient Prep</b>											
<b>Duplicate (B109287-DUP3)</b>			<b>Source: S109179-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.0100	U	mg/L	0.0100	0.0380		U				30
<b>Duplicate (B109287-DUP4)</b>			<b>Source: S109186-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.569		mg/L	0.0100	0.0380		0.554			2.67	30
<b>Duplicate (B109287-DUP5)</b>			<b>Source: S109193-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.0130	I	mg/L	0.0100	0.0380		0.0140			7.41	30
<b>Duplicate (B109287-DUP6)</b>			<b>Source: S109196-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.0820		mg/L	0.0100	0.0380		0.0790			3.73	30
<b>Duplicate (B109287-DUP7)</b>			<b>Source: S109196-11</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.0240	I	mg/L	0.0100	0.0380		0.0280			15.4	30
<b>Matrix Spike (B109287-MS1)</b>			<b>Source: S109167-04</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.573		mg/L	0.0100	0.0380	0.500	0.0740	99.8	90-110		
<b>Matrix Spike (B109287-MS2)</b>			<b>Source: S109168-02</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.999		mg/L	0.0100	0.0380	0.500	0.535	92.8	90-110		
<b>Matrix Spike (B109287-MS3)</b>			<b>Source: S109179-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.472		mg/L	0.0100	0.0380	0.500	U	94.4	90-110		
<b>Matrix Spike (B109287-MS4)</b>			<b>Source: S109186-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	1.03		mg/L	0.0100	0.0380	0.500	0.554	94.8	90-110		
<b>Matrix Spike (B109287-MS5)</b>			<b>Source: S109193-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.477		mg/L	0.0100	0.0380	0.500	0.0140	92.6	90-110		



# Mosaic Fertilizer, L.L.C.

## Environmental Lab



NELAP Certification #  
E 84578

### QC REPORT

THESE RESULTS MEET NELAP STANDARDS

Work Order Number: S109162  
Project Name: DeSoto County - Split Sampling

#### Wet Chemistry - Quality Control

Analyte	Result	Qualifiers	Units	MDL	PQL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch B109287 - Nutrient Prep</b>											
<b>Matrix Spike (B109287-MS6)</b>			<b>Source: S109196-01</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.533		mg/L	0.0100	0.0380	0.500	0.0790	90.8	90-110		
<b>Matrix Spike (B109287-MS7)</b>			<b>Source: S109196-11</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>					
Nitrate-Nitrite	0.518		mg/L	0.0100	0.0380	0.500	0.0280	98.0	90-110		
<b>Reference (B109287-SRM1)</b>			<b>Prepared &amp; Analyzed: 09/29/21</b>								
Nitrate-Nitrite	1.08		mg/L	0.0100	0.0380	1.00		108	90-110		



# Mosaic Fertilizer, L.L.C.

## Environmental Lab



NELAP Certification #  
E 84578

*Courtney McManus*

10/12/2021

Courtney McManus For Joshua Lipham / Technical Director

Date

### **DATA QUALIFIERS THAT MAY APPLY:**

- U = Not detected at or above the adjusted reporting limit
- I = The value is between the MDL and the PQL
- V = The analyte was detected in both the sample and the associated method blank
- J-3 = A sample matrix interference is suspected. Does not interfere with data usability.
- J-2 = The reported value failed to meet the established quality control criteria for either precision or accuracy. The data usability is not effected.

### **NOTES:**

- MDL = Method Detection Limit
- PQL = Practical Quantification Limit
- %REC = Percent Recovery
- RPD = Relative Percent Difference

For questions and comments regarding these results, please contact Joshua Lipham @ (863) 428-2732 (email: Joshua.Lipham@mosaicco.com).  
*Results relate only to the samples.*

S109162

Mosaic  
Minerals Environmental  
13830 Circa Crossing Dr.

Date: \_\_\_\_\_  
COC #: \_\_\_\_\_

Mosaic Environmental  
7450 CR 630  
Mulberry, FL. 33860  
(863) 534 - 9769

Lithia, FL 33547

Samples For:

Owner: Mike Mooneyham

Revision Date: 09/7/2021

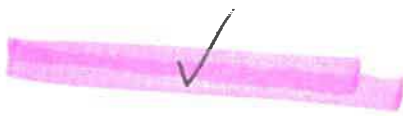
Sampled By (Print):

*Phyllis Baxter*

Sampler Signature:

Project Name: DeSoto County Split Sampling *CLSM-002*

					Project Name: DeSoto County Split Sampling <i>CLSM-002</i>											
					A	B	C	D	E	F	G					COMMENTS
Date:	Time:	LAB ID #	SOURCE ID	Sample ID	Type	Unpreserved 950 ml: TSS, FSS	Unpreserved 250 ml: F,SO4	H2SO4 500ML: TOTAL P, TOTAL N	Unpreserved 500 ml Amber: Chloro-A	H2SO4 950ml Glass Amber: Oil and Grease	HN03 250ML: AS	HN03 1/2 gal: GA15,RA 226/228				
<i>9-21-21</i>	<i>10:15</i>	<i>01</i>	<i>002002</i>	<i>LSM-002</i>	<i>G</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>				
Items:					Relinquished By:		Accepted By:		Date / Time:							
<i>7</i>					<i>[Signature]</i>		<i>[Signature]</i>		<i>9-21-21 @ 14:10</i>							



TEMP *3.6* C  
THERMOMETER ID  
1080409  
PHX2 *✓* INIT. *we*  
PH PAPER ID  
0051201



SURFACE WATER DATA SHEET

Project:

(LSM-002) Desota County Split Sampling

Sampler(s):

V. Baxter

Date:

9-21-21

FDEP-FT-1100 FDEP-FT-1200 FDEP-FT-1400 FDEP-FT-1600 FDEP-FT-1500

Source ID	Location	TYPE	TIME	PH	COND	TEMP	Turbidity	DO	DO Sat	SAMPLE DEPTH	FLOW	STAFF GAUGE	WATER ELEVATION	COLOR
		Grab/Comp.		6.0< PH <8.5 S.U.	<1275 µS	°C	<29 NTU's	>5.0 mg/L	>38 %	Feet	MGD	Feet	MSL	
	LSM-002	G	10:15	7.79	420	28.4	6.18	—	61.4	70%	2.46	1.10	—	LT

Source ID	Location	Width (ft)	x Depth (ft)	x Velocity (ft/s)	= CFS	x 0.64632 = MGD

Sampling Sequence: VOC, Organics, Metals, Microbio, Inorganics/Physical, Rad

BEGIN TIME 10:15 END TIME 10:25

FIELD CONDITIONS FOR SAMPLING DATE :

CLOUD COVER: Clear / Scattered / Broken / Overcast

WIND DIRECTION: N / NE / E / SE / S / SW / W / NW / Variable / Calm

AMBIENT TEMP. (°C) start: 30.0° end: 30.0°

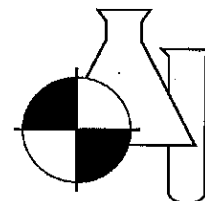
VISIBILITY start: Clear end: Clear

COMMENTS:

Owner: Mike Mooneyham Effective: 09/24/2019

# BENCHMARK

## EnviroAnalytical Inc.



NELAC Certification #E84167

### ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

Submission Number : 21091353

Mosaic Fertilizer, L L C  
13830 Circa Crossing Drive  
Lithia, FL 33547

Joshua Lipham

Project Name : DESOTO COUNTY - SPLIT SAMPLING

Project ID : S109162


Date Received : 09/22/2021

Time Received : 1410

Submission Number: 21091353  
Sample Number: 001  
Sample Date: 09/21/2021  
Sample Time: 1015

Sample Point: 007002  
Sample ID: S109162-01  
Sample Description: LSM-002  
Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis Date/Time	Analyst
OIL & GREASE	3.67 I	MG/L	1.37	5.48	1664A	09/28/2021 09:25	CE
ARSENIC	4.17	UG/L	0.689	2.766	SM3113B	09/24/2021 14:30	BLB/IE

  
Dale D. Dixon / Laboratory Director  
Tulay Tarrisever - Technical Director/QC Officer  
Kara Peterson / QA Officer

10/07/2021  
Date

**DATA QUALIFIERS THAT MAY APPLY:**

A = Value reported is an average of two or more determinations.  
G2 = Accuracy standard exceeds acceptable control limits. Duplicate and spike values are within control limits. Reported data are usable.  
B = Results based upon colony counts outside the ideal range.  
H = Value based on field kit determination. Results may not be accurate.  
I = Reported value is between the laboratory MDL and the PQL.  
J1 = Estimated value. Surrogate recovery limits exceeded.  
J2 = Estimated value. No quality control criteria exists for component.  
J3 = Estimated value. Quality control criteria for precision or accuracy not met.  
J4 = Estimated value. Sample matrix interference suspected.  
J5 = Estimated value. Data questionable due to improper lab or field protocols.  
K = Off-scale low. Value is known to be < the value reported.  
L = Off-scale high. Value is known to be > the value reported.  
N = Presumptive evidence of presence of material.  
O = Sampled, but analysis lost or not performed.  
Q = Sample held beyond accepted hold time.

T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.  
U = Analyte analyzed but not detected at the value indicated.  
V = Analyte detected in sample and method blank. Results for this analyte in associated samples may be biased high. Standard, Duplicate and Spike values are within control limits. Reported data are usable.  
Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.  
Z = Too many colonies were present (TNTC). The numeric value represents the filtration volume.  
I = Data deviate from historically established concentration ranges.  
? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the presence or absence of the analyte cannot be determined from the data.  
\* = Not reported due to interference.  
Oil & Grease - if client does not send sufficient sample quantity for spike evaluation surface water samples are supplied by the laboratory.

**COMMENTS:**

**NOTES:**

PQL = 4xMDL  
MBAS calculated as LAS; molecular weight = 340.  
ND = Not detected at or above the adjusted reporting limit.

For questions and comments regarding these results, please contact us at (941) 723-9986.  
Results relate only to the samples.

SUBCONTRACT ORDER  
Mosaic Fertilizer, LLC Environmental Laboratory



DeSoto County  
DeSoto County - Split Sampling

S109162

SENDING LABORATORY:

Mosaic Fertilizer, LLC Environmental Laboratory  
7450 CR 630 Building 1  
Mulberry, FL 33865  
Phone: 863-428-2764  
Project Manager: Joshua Lipham

RECEIVING LABORATORY:

Benchmark Analytical  
1711 12th St. E.  
Palmetto, FL 34221  
Phone : (941) 723-9986

Sub Lab ID

Sample ID: S109162-01 007002

LSM-002

Water

Sampled: 09/21/21 10:15

21091853-1

Oil & Grease, EPA 1664A \*

As, Total SM3113 B \*

Sample Receipt Temp. 0.2 °C

Thermometer ID: 2651

pH < 2 1 Init. nm

Containers:

2

Released By

*[Signature]*

Received By

*[Signature]*

Date

9-22-21 @ 1240

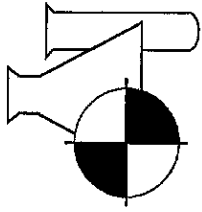
2

Released By

Received By

Date

9/22/21 14/10



# BENCHMARK

*EnviroAnalytical Inc.*

NELAC Certification #E84167

Submission Number: 21091353  
 Project Name: DESOTO COUNTY - SPLIT SAMPLING

## QC REPORT

SUBMISSION NUMBER	SAMPLE NUMBER	METHOD	ANALYTE	ANALYSIS DATE/TIME	QC FLAG	QC VALUE	SAMPLE RESULT	LR RESULT	LR %RSD	SPK RESULT	STD-SPK %REC
		1664A	OIL & GREASE	09/28/2021 09:25	MB	0.00	0.400				
		1664A	OIL & GREASE	09/28/2021 09:25	MB	0.00	0.700				
21091099 - 001	595400	1664A	OIL & GREASE	09/28/2021 09:25	SPK	40.00	0.400			43.300	107.3
		1664A	OIL & GREASE	09/28/2021 09:25	STD	40.00	42.100				105.3
		1664A	OIL & GREASE	09/28/2021 09:25	STD	40.00	43.500				108.8
		SM3113B	ARSENIC	09/24/2021 15:14	LCS MID	20.00	21.900				109.5
		SM3113B	ARSENIC	09/24/2021 13:55	MB	0.00	0.000				
		SM3113B	ARSENIC	09/24/2021 15:11	MB	0.00	0.000				
21091012 - 001	595184	SM3113B	ARSENIC	09/24/2021 14:17	MS	20.00	0.000			21.800	110.9
21091012 - 001	595184	SM3113B	ARSENIC	09/24/2021 14:23	MSD	20.00	21.800	24.200	10.30		
		SM3113B	ARSENIC	09/24/2021 13:58	QCS	20.00	21.700				108.0

Comments:

QC FLAGS: MB or BLK = METHOD BLANK LR = LAB REPLICATE MSD = MATRIX SPIKE DUPLICATE STD or LCS = STANDARD SPK or MS = MATRIX SPIKE





# Florida Radiochemistry Services, Inc.

Contact: Michael J. Naumann

5456 Hoffner Ave., Suite 201 Orlando, FL 32812

Phone: (407) 382-7733 Fax: (407)382-7744

Certification I. D. # E83033

Work Order #: 2109144

Report Date: 10/01/21

Report to:

Mosaic Fertilizer, LLC.

13830 Circe Crossing Drive

Lithia, FL 33547

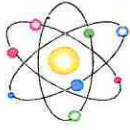
Attention: Joshua Lipham / Adriana Rivers

I do hereby affirm that this record contains no willful misrepresentations and that this information given by me is true to the best of my knowledge and belief. I further certify that the methods and quality control measures used to produce these laboratory results were implemented in accordance with the requirements of this laboratory's certification and TNI Standards. The test results in this report relate only to the samples received.

Signed

Michael J. Naumann – President  
Shawn M. Naumann – Laboratory Manager

Date 10-1-21



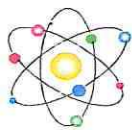
Florida Radiochemistry Services, Inc.

**Sample Login**

<b>Client:</b>	<b>The Mosaic Company</b>	<b>Date / Time Received</b>	<b>Work order #</b>
		<b>09/28/21 11:30</b>	<b>2109144</b>
<b>Client Contact:</b>	<b>Joshua Lipham/Adriana Rivers</b>		
<b>Project I.D.</b>	<b>DeSoto County DeSoto County - Split Sampling</b>		
<b>Lab Sample I.D.</b>	<b>Client Sample I.D.</b>	<b>Sample Date/Time</b>	<b>Analysis Requested</b>
<b>2109144-01</b>	<b>S109162-01 LSM-002</b>	<b>09/21/21 10:15</b>	<b>Gross Alpha</b>

**Analysis Results**

<b>Gross Alpha</b>	<b>6.4</b>
<b>Error +/-</b>	<b>2.1</b>
<b>MDL</b>	<b>1.4</b>
<b>EPA Method</b>	<b>900.0</b>
<b>Prep Date</b>	<b>09/29/21</b>
<b>Prep Time</b>	<b>08:50</b>
<b>Analysis Date</b>	<b>09/30/21</b>
<b>Analysis Time</b>	<b>06:34</b>
<b>Analyst</b>	<b>MJN</b>
<b>Units</b>	<b>pCi/l</b>



QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Gross Alpha	2109145-01	09/30/21	2.2	10.0	11.1	11.2	89	0.9
		<b>Quality</b>	<b>Control</b>	<b>Limits</b>				
		<b>% RPD</b>		<b>% Rec.</b>				
Gross Alpha		20.0		70-130				

SUBCONTRACT ORDER  
Mosaic Fertilizer, LLC Environmental Laboratory



DeSoto County  
DeSoto County - Split Sampling

S109162

SENDING LABORATORY:

Mosaic Fertilizer, LLC Environmental Laboratory  
7450 CR 630 Building 1  
Mulberry, FL 33865  
Phone: 863-428-2764  
Project Manager: Joshua Lipham

RECEIVING LABORATORY:

Florida Radiochemistry Service  
5456 Hoffner Avenue #201  
Orlando, FL 32812-2517  
Phone :(407) 382-7733

Sub Lab ID

Sample ID: S109162-01 007002

LSM-002

Water

Sampled: 09/21/21 10:15

GA 15

Containers:

1

*K. Korman*

Released By

*M. Maun*

Received By

*9-28-21 11:30*

Date

Released By

Received By

Date