



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

## Report of Analysis

|                   |                           |                 |                       |
|-------------------|---------------------------|-----------------|-----------------------|
| Client:           |                           | Date Collected: | 1/16/2018 12:00:00 AM |
| Project:          | LB93188                   | Date Received:  | 1/16/2018 12:00:00 AM |
| Client Sample ID: | LOD-MDL-WATER-01-QT1-2018 | SDG No.:        | LB93188               |
| Lab Sample ID:    | J1161-07                  | Matrix:         | WATER                 |
| Level (low/med):  | low                       | % Solid:        | 0                     |

| Cas | Parameter    | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-------|-----|------------|-------|------------|------------|------------|
|     | Ammonia as N | 0.12  |      | 1  | 0.034 |     | 0.1        | mg/L  | 02/08/2018 | 02/09/2018 | SM4500-NH3 |



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|                   |                       |                 |                       |
|-------------------|-----------------------|-----------------|-----------------------|
| Client:           |                       | Date Collected: | 1/16/2018 12:00:00 AM |
| Project:          | LB93188               | Date Received:  | 1/16/2018 12:00:00 AM |
| Client Sample ID: | MDL-WATER-03-QT1-2018 | SDG No.:        | LB93188               |
| Lab Sample ID:    | J1161-09              | Matrix:         | WATER                 |
| Level (low/med):  | low                   | % Solid:        | 0                     |

| Cas | Parameter    | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-------|-----|------------|-------|------------|------------|------------|
|     | Ammonia as N | 0.13  |      | 1  | 0.034 |     | 0.1        | mg/L  | 02/08/2018 | 02/09/2018 | SM4500-NH3 |



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## Report of Analysis

|                   |          |                 |                      |
|-------------------|----------|-----------------|----------------------|
| Client:           |          | Date Collected: | 2/5/2018 12:00:00 AM |
| Project:          | LB93188  | Date Received:  | 2/7/2018 12:00:00 AM |
| Client Sample ID: | COMP-1   | SDG No.:        | LB93188              |
| Lab Sample ID:    | J1475-11 | Matrix:         | Solid                |
| Level (low/med):  | low      | % Solid:        | 79.4                 |

| Cas | Parameter    | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-----|-----|------------|-------|------------|------------|------------|
|     | Ammonia as N | 87.2  |      | 1  | 2.1 |     | 6.2        | mg/Kg | 02/08/2018 | 02/09/2018 | SM4500-NH3 |



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|                   |          |                 |                      |
|-------------------|----------|-----------------|----------------------|
| Client:           |          | Date Collected: | 2/5/2018 12:00:00 AM |
| Project:          | LB93188  | Date Received:  | 2/7/2018 12:00:00 AM |
| Client Sample ID: | COMP-2   | SDG No.:        | LB93188              |
| Lab Sample ID:    | J1475-12 | Matrix:         | Solid                |
| Level (low/med):  | low      | % Solid:        | 84.7                 |

| Cas | Parameter    | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-----|-----|------------|-------|------------|------------|------------|
|     | Ammonia as N | 19.6  |      | 1  | 2   |     | 5.8        | mg/Kg | 02/08/2018 | 02/09/2018 | SM4500-NH3 |



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## Report of Analysis

|                   |          |                 |                      |
|-------------------|----------|-----------------|----------------------|
| Client:           |          | Date Collected: | 2/5/2018 12:00:00 AM |
| Project:          | LB93188  | Date Received:  | 2/7/2018 12:00:00 AM |
| Client Sample ID: | COMP-3   | SDG No.:        | LB93188              |
| Lab Sample ID:    | J1475-13 | Matrix:         | Solid                |
| Level (low/med):  | low      | % Solid:        | 81.4                 |

| Cas | Parameter    | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date  | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-----|-----|------------|-------|------------|------------|------------|
|     | Ammonia as N | 59.2  |      | 1  | 2   |     | 6          | mg/Kg | 02/08/2018 | 02/09/2018 | SM4500-NH3 |



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## Report of Analysis

|                   |             |                 |         |
|-------------------|-------------|-----------------|---------|
| Client:           |             | Date Collected: |         |
| Project:          | LB93188     | Date Received:  |         |
| Client Sample ID: | MDL-SOIL-04 | SDG No.:        | LB93188 |
| Lab Sample ID:    | MDL-SOIL-04 | Matrix:         | Solid   |
| Level (low/med):  | low         | % Solid:        | 100     |

| Cas | Parameter    | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-------|-----|------------|-------|-----------|------------|------------|
|     | Ammonia as N | 0.1   |      | 1  | 0.034 |     | 0.1        | mg/Kg |           | 02/09/2018 | SM4500-NH3 |

**Report of Analysis**

|                   |             |                 |         |
|-------------------|-------------|-----------------|---------|
| Client:           |             | Date Collected: |         |
| Project:          | LB93188     | Date Received:  |         |
| Client Sample ID: | MDL-SOIL-05 | SDG No.:        | LB93188 |
| Lab Sample ID:    | MDL-SOIL-05 | Matrix:         | Solid   |
| Level (low/med):  | low         | % Solid:        | 100     |

| Cas | Parameter    | Conc. | Qua. | DF | MDL   | LOD | LOQ / CRQL | Units | Prep Date | Date Ana.  | Ana Met.   |
|-----|--------------|-------|------|----|-------|-----|------------|-------|-----------|------------|------------|
|     | Ammonia as N | 0.099 | J    | 1  | 0.034 |     | 0.1        | mg/Kg |           | 02/09/2018 | SM4500-NH3 |



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## Report of Analysis

|                   |             |                 |         |
|-------------------|-------------|-----------------|---------|
| Client:           |             | Date Collected: |         |
| Project:          | LB93188     | Date Received:  |         |
| Client Sample ID: | MDL-SOIL-05 | SDG No.:        | LB93188 |
| Lab Sample ID:    | MDL-SOIL-05 | Matrix:         | Solid   |
| Level (low/med):  | low         | % Solid:        | 100     |

| Cas | Parameter | Conc. | Qua. | DF | MDL | LOD | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|-----|-----------|-------|------|----|-----|-----|------------|-------|-----------|-----------|----------|
|-----|-----------|-------|------|----|-----|-----|------------|-------|-----------|-----------|----------|

|               |                 |            |
|---------------|-----------------|------------|
| Color Before: | Clarity Before: | Texture:   |
| Color After:  | Clarity After:  | Artifacts: |
| Comments:     |                 |            |

U = Not Detected  
LOQ = Limit of Quantitation  
MDL = Method Detection Limit  
LOD = Limit of Detection  
D = Dilution  
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
B = Analyte Found in Associated Method Blank  
\* = indicates the duplicate analysis is not within control limits.  
E = Indicates the reported value is estimated because of the presence of interference.  
OR = Over Range  
N = Spiked sample recovery not within control limits







## GENCHEM

- 2a -

### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB93188

SDG No.: LB93188

Contract: \_\_\_\_\_ Lab Code: CHEM

Case No.: LB93188

SAS No.: LB93188

Initial Calibration Source: \_\_\_\_\_

Continuing Calibration Source: \_\_\_\_\_

| Sample ID | Analyte      | Result<br>mg/L | True Value | %<br>Recovery | Qual | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|--------------|----------------|------------|---------------|------|---------------------------|---|------------------|------------------|---------------|
| CCV1      | Ammonia as N | 0.96           | 1          | 96            |      | 90 - 110                  |   | 02/09/2018       | 10:16            | LB93188       |
| CCV2      | Ammonia as N | 0.93           | 1          | 93            |      | 90 - 110                  |   | 02/09/2018       | 10:26            | LB93188       |
| CCV3      | Ammonia as N | 0.98           | 1          | 98            |      | 90 - 110                  |   | 02/09/2018       | 11:18            | LB93188       |



**GENCHEM**

- 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** LB93188

SDG No.: LB93188

**Contract:**

Lab Code: CHEM

**Case No.:** LB93188

**SAS No.:** LB93188

| Sample ID | Analyte      | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M   | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|--------------|----------------|---------------------|--------------|-----|------|-----|------------------|------------------|---------------|
| ICB1      | Ammonia as N | 0.018          | +/-0.1              | U            |     |      | 0.1 | 02/09/2018       | 10:16            | LB93188       |

| Sample ID | Analyte      | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M   | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|--------------|----------------|---------------------|--------------|-----|------|-----|------------------|------------------|---------------|
| CCB1      | Ammonia as N | 0.016          | +/-0.1              | U            |     |      | 0.1 | 02/09/2018       | 10:16            | LB93188       |
| CCB2      | Ammonia as N | 0.016          | +/-0.1              | U            |     |      | 0.1 | 02/09/2018       | 10:26            | LB93188       |
| CCB3      | Ammonia as N | 0.03           | +/-0.1              | U            |     |      | 0.1 | 02/09/2018       | 11:18            | LB93188       |



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB93188

SDG No.: LB93188

Contract: Lab Code: CHEM

Case No.: LB93188

SAS No.: LB93188

| Sample ID | Analyte | Result<br>mg/L | Acceptance<br>Limit | Conc<br>Qual | LOD | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|
|-----------|---------|----------------|---------------------|--------------|-----|------|---|------------------|------------------|---------------|



**GENCHEM**  
**- 3b -**  
**PREPARATION BLANK SUMMARY**

**Client:** LB93188

**SDG No.:** LB93188

**Instrument:** Konelab 20

| Sample ID  | Analyte      | Result<br>(mg/Kg) | Acceptance<br>Limit | Conc<br>Qual  | LOD<br>mg/Kg | CRQL<br>mg/Kg | M | Analysis<br>Date | Analysis<br>Time | Run     |
|------------|--------------|-------------------|---------------------|---------------|--------------|---------------|---|------------------|------------------|---------|
| PB106412BL | Ammonia as N | SOLID             |                     | Batch Number: |              | PB106412      |   | Prep Date:       | 02/08/2018       |         |
|            |              | 0.77              | <4.9                | U             |              | 4.9           |   | 02/09/2018       | 10:16            | LB93188 |
| Sample ID  | Analyte      | Result<br>(mg/L)  | Acceptance<br>Limit | Conc<br>Qual  | LOD<br>mg/L  | CRQL<br>mg/L  | M | Analysis<br>Date | Analysis<br>Time | Run     |
| PB106418BL | Ammonia as N | WATER             |                     | Batch Number: |              | PB106418      |   | Prep Date:       | 02/08/2018       |         |
|            |              | 0.018             | <0.1                | U             |              | 0.1           |   | 02/09/2018       | 10:26            | LB93188 |



GENCHEM  
- 5a -  
MATRIX SPIKE SUMMARY

client: LB93188 level: low sdg no.: LB93188  
contract: lab code: CHEM case no.: LB93188 sas no.: LB93188  
matrix: Solid sample id: J1475-11 client id: COMP-1MS  
Percent Solids for Sample: 79.4 Spiked ID: J1475-11MS Percent Solids for Spike Sample: 79.4

| Analyte      | Units | Acceptance<br>Limit %R | Spiked<br>Result | C  | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|--------------|-------|------------------------|------------------|----|------------------|---|----------------|---------------|------|---|
| Ammonia as N | mg/Kg | 75 - 125               | 131              | OR | 87.2             |   | 61.1           | 72            | *    |   |



GENCHEM  
- 5a -  
MATRIX SPIKE DUPLICATE SUMMARY

client: LB93188 level: low sdg no.: LB93188  
contract: lab code: CHEM case no.: LB93188 sas no.: LB93188  
matrix: Solid sample id: J1475-11 client id: COMP-1MSD  
Percent Solids for Sample: 79.4 Spiked ID: J1475-11MSD Percent Solids for Spike Sample: 79.4

| Analyte      | Units | Acceptance<br>Limit %R | MSD<br>Result | C  | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|--------------|-------|------------------------|---------------|----|------------------|---|----------------|---------------|------|---|
| Ammonia as N | mg/Kg | 75 - 125               | 131           | OR | 87.2             |   | 62.3           | 70            | *    |   |



# GENCHEM

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## DUPLICATE SAMPLE SUMMARY

**Client:** LB93188      **Level:** LOW      **SDG No.:** LB93188  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB93188      **SAS No.:** LB93188  
**Matrix:** Solid      **Sample ID:** J1475-11      **Client ID:** COMP-1DUP  
**Percent Solids for Sample:** 79.4      **Duplicate ID** J1475-11DUP      **Percent Solids for Spike Sample:** 79.4

| Analyte      | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|--------------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Ammonia as N | mg/Kg | 20                  | 87.2             |   | 87.3                |   | 0   |      |   |

# GENCHEM

- 6 -

## DUPLICATE SAMPLE SUMMARY

**Client:** LB93188      **Level:** LOW      **SDG No.:** LB93188  
**Contract:**                           **Lab Code:** CHEM      **Case No.:** LB93188      **SAS No.:** LB93188  
**Matrix:** Solid      **Sample ID:** J1475-11MS      **Client ID:** COMP-1MSD  
**Percent Solids for Sample:** 79.4      **Duplicate ID** J1475-11MSD      **Percent Solids for Spike Sample:** 79.4

| Analyte      | Units | Acceptance<br>Limit | Sample<br>Result | C  | Duplicate<br>Result | C  | RPD | Qual | M |
|--------------|-------|---------------------|------------------|----|---------------------|----|-----|------|---|
| Ammonia as N | mg/Kg | 20                  | 131              | OR | 131                 | OR | 0   |      |   |



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB93188

SDG No.: LB93188

Contract:

Lab Code: CHEM

Case No.: LB93188

SAS No.: LB93188

| Analyte                    | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|----------------------------|-------|------------|--------|---|---------------|----------------------|---|
| PB106412BS<br>Ammonia as N | mg/Kg | 49         | 47.6   |   | 97.1          | 80 - 120             |   |



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB93188

SDG No.: LB93188

Contract:

Lab Code: CHEM

Case No.: LB93188

SAS No.: LB93188

| Analyte                    | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|----------------------------|-------|------------|--------|---|---------------|----------------------|---|
| PB106418BS<br>Ammonia as N | mg/L  | 1          | 0.95   |   | 95            | 80 - 120             |   |

## Daily Analysis Runlog For Sequence/QC Batch ID # LB93188

|               |  |                                 |  |                |  |  |
|---------------|--|---------------------------------|--|----------------|--|--|
| Review By     |  | Review On                       |  |                |  |  |
| SubDirectory  |  | LB93188                         |  | Test : Ammonia |  |  |
| STD. NAME     |  | STD REF.#                       |  |                |  |  |
| ICAL Standard |  | WP61746                         |  |                |  |  |
| ICV Standard  |  | WP61748                         |  |                |  |  |
| CCV Standard  |  | WP61747                         |  |                |  |  |
| ICSA Standard |  | N/A                             |  |                |  |  |
| CRI Standard  |  | N/A                             |  |                |  |  |
| LCS Standard  |  | WP58910                         |  |                |  |  |
| Chk Standard  |  | WP61582,WP60781,WP61174,WP61175 |  |                |  |  |

| Sr# | SampleId    | ClientID        | QcType | Date           | Comment | Status |
|-----|-------------|-----------------|--------|----------------|---------|--------|
| 1   | 0.1PPM      | 0.1PPM          | CAL1   | 02/09/18 09:28 |         | OK     |
| 2   | 0.2PPM      | 0.2PPM          | CAL2   | 02/09/18 09:28 |         | OK     |
| 3   | 0.4PPM      | 0.4PPM          | CAL3   | 02/09/18 09:28 |         | OK     |
| 4   | 1.0PPM      | 1.0PPM          | CAL4   | 02/09/18 09:28 |         | OK     |
| 5   | 1.3PPM      | 1.3PPM          | CAL5   | 02/09/18 09:28 |         | OK     |
| 6   | 2.0PPM      | 2.0PPM          | CAL6   | 02/09/18 09:28 |         | OK     |
| 7   | ICV1        | ICV1            | ICV    | 02/09/18 10:16 |         | OK     |
| 8   | ICB1        | ICB1            | ICB    | 02/09/18 10:16 |         | OK     |
| 9   | CCV1        | CCV1            | CCV    | 02/09/18 10:16 |         | OK     |
| 10  | CCB1        | CCB1            | CCB    | 02/09/18 10:16 |         | OK     |
| 11  | PB106412BL  | PB106412BL      | MB     | 02/09/18 10:16 |         | OK     |
| 12  | PB106412BS  | PB106412BS      | LCS    | 02/09/18 10:16 |         | OK     |
| 13  | J1475-12    | COMP-2          | SAM    | 02/09/18 10:26 |         | OK     |
| 14  | J1475-13    | COMP-3          | SAM    | 02/09/18 10:26 |         | OK     |
| 15  | MDL-SOIL-04 | MDL-SOIL-04     | SAM    | 02/09/18 10:26 |         | OK     |
| 16  | MDL-SOIL-05 | MDL-SOIL-05     | SAM    | 02/09/18 10:26 |         | OK     |
| 17  | CCV2        | CCV2            | CCV    | 02/09/18 10:26 |         | OK     |
| 18  | CCB2        | CCB2            | CCB    | 02/09/18 10:26 |         | OK     |
| 19  | PB106418BL  | PB106418BL      | MB     | 02/09/18 10:26 |         | OK     |
| 20  | PB106418BS  | PB106418BS      | LCS    | 02/09/18 10:26 |         | OK     |
| 21  | J1161-07    | LOD-MDL-WATER-0 | SAM    | 02/09/18 10:26 |         | OK     |

**Daily Analysis Runlog For Sequence/QC Batch ID # LB93188**

|                  |             |                                 |     |                |  |    |
|------------------|-------------|---------------------------------|-----|----------------|--|----|
| Review By        |             | Review On                       |     |                |  |    |
| SubDirectory     |             | LB93188                         |     | Test : Ammonia |  |    |
| <b>STD. NAME</b> |             | <b>STD REF.#</b>                |     |                |  |    |
| ICAL Standard    |             | WP61746                         |     |                |  |    |
| ICV Standard     |             | WP61748                         |     |                |  |    |
| CCV Standard     |             | WP61747                         |     |                |  |    |
| ICSA Standard    |             | N/A                             |     |                |  |    |
| CRI Standard     |             | N/A                             |     |                |  |    |
| LCS Standard     |             | WP58910                         |     |                |  |    |
| Chk Standard     |             | WP61582,WP60781,WP61174,WP61175 |     |                |  |    |
| 22               | J1161-09    | MDL-WATER-03-QT                 | SAM | 02/09/18 10:26 |  | OK |
| 23               | J1475-11    | COMP-1                          | SAM | 02/09/18 11:18 |  | OK |
| 24               | J1475-11DUP | COMP-1DUP                       | DUP | 02/09/18 11:18 |  | OK |
| 25               | J1475-11MS  | COMP-1MS                        | MS  | 02/09/18 11:18 |  | OK |
| 26               | J1475-11MSD | COMP-1MSD                       | MSD | 02/09/18 11:18 |  | OK |
| 27               | CCV3        | CCV3                            | CCV | 02/09/18 11:18 |  | OK |
| 28               | CCB3        | CCB3                            | CCB | 02/09/18 11:18 |  | OK |