

**metals**  
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**MATRIX SPIKE SUMMARY**

**client:** Kleinfelder **level:** low **sdg no.:** Q2807  
**contract:** POWE02 **lab code:** ACE  
**matrix:** Solid **sample id:** Q2793-01 **client id:** VNJ-231MS

**Percent Solids for Sample:** 92.7 **Spiked ID:** Q2793-01MS **Percent Solids for Spike Sample:** 92.7

| Analyte   | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|-----------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Aluminum  | mg/Kg | 75 - 125               | 5770             |   | 5530             |   | 93.4           | 254           |      | P |
| Antimony  | mg/Kg | 75 - 125               | 21.3             |   | 2.38             | U | 37.4           | 57            | N    | P |
| Arsenic   | mg/Kg | 75 - 125               | 31.4             |   | 3.57             |   | 37.4           | 74            | N    | P |
| Barium    | mg/Kg | 75 - 125               | 63.4             |   | 55.0             |   | 9.3            | 90            |      | P |
| Beryllium | mg/Kg | 75 - 125               | 6.57             |   | 0.47             |   | 9.3            | 66            | N    | P |
| Cadmium   | mg/Kg | 75 - 125               | 8.00             |   | 0.32             |   | 9.3            | 83            |      | P |
| Calcium   | mg/Kg | 75 - 125               | 1390             |   | 1440             |   | 46.7           | -110          |      | P |
| Chromium  | mg/Kg | 75 - 125               | 21.1             |   | 10.1             |   | 18.7           | 59            | N    | P |
| Cobalt    | mg/Kg | 75 - 125               | 12.3             |   | 4.83             |   | 9.3            | 81            |      | P |
| Copper    | mg/Kg | 75 - 125               | 26.6             |   | 16.6             |   | 14.0           | 71            | N    | P |
| Iron      | mg/Kg | 75 - 125               | 9580             |   | 10700            |   | 140            | -806          |      | P |
| Lead      | mg/Kg | 75 - 125               | 82.5             |   | 42.2             |   | 46.7           | 86            |      | P |
| Magnesium | mg/Kg | 75 - 125               | 1510             |   | 1480             |   | 93.4           | 42            |      | P |
| Manganese | mg/Kg | 75 - 125               | 280              |   | 302              |   | 9.3            | -242          |      | P |
| Nickel    | mg/Kg | 75 - 125               | 28.7             |   | 9.50             |   | 23.3           | 82            |      | P |
| Potassium | mg/Kg | 75 - 125               | 943              |   | 561              |   | 470            | 81            |      | P |
| Selenium  | mg/Kg | 75 - 125               | 64.0             |   | 0.95             | U | 93.4           | 68            | N    | P |
| Silver    | mg/Kg | 75 - 125               | 2.91             |   | 0.37             | J | 3.5            | 72            | N    | P |
| Sodium    | mg/Kg | 75 - 125               | 317              |   | 235              |   | 140            | 58            | N    | P |
| Thallium  | mg/Kg | 75 - 125               | 81.7             |   | 1.90             | U | 93.4           | 88            |      | P |
| Vanadium  | mg/Kg | 75 - 125               | 24.2             |   | 14.8             |   | 14.0           | 67            | N    | P |
| Zinc      | mg/Kg | 75 - 125               | 54.9             |   | 48.8             |   | 9.3            | 65            |      | P |

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**MATRIX SPIKE DUPLICATE SUMMARY**

**client:** Kleinfelder **level:** low **sdg no.:** Q2807  
**contract:** POWE02 **lab code:** ACE  
**matrix:** Solid **sample id:** Q2793-01 **client id:** VNJ-231MSD

**Percent Solids for Sample:** 92.7 **Spiked ID:** Q2793-01MSD **Percent Solids for Spike Sample:** 92.7

| Analyte   | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|-----------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|---|
| Aluminum  | mg/Kg | 75 - 125               | 5350          |   | 5530             |   | 93.0           | -202          |      | P |
| Antimony  | mg/Kg | 75 - 125               | 20.9          |   | 2.38             | U | 37.2           | 56            | N    | P |
| Arsenic   | mg/Kg | 75 - 125               | 29.4          |   | 3.57             |   | 37.2           | 69            | N    | P |
| Barium    | mg/Kg | 75 - 125               | 61.3          |   | 55.0             |   | 9.3            | 67            |      | P |
| Beryllium | mg/Kg | 75 - 125               | 6.44          |   | 0.47             |   | 9.3            | 64            | N    | P |
| Cadmium   | mg/Kg | 75 - 125               | 7.86          |   | 0.32             |   | 9.3            | 81            |      | P |
| Calcium   | mg/Kg | 75 - 125               | 1360          |   | 1440             |   | 46.5           | -168          |      | P |
| Chromium  | mg/Kg | 75 - 125               | 20.5          |   | 10.1             |   | 18.6           | 56            | N    | P |
| Cobalt    | mg/Kg | 75 - 125               | 12.1          |   | 4.83             |   | 9.3            | 78            |      | P |
| Copper    | mg/Kg | 75 - 125               | 26.5          |   | 16.6             |   | 13.9           | 71            | N    | P |
| Iron      | mg/Kg | 75 - 125               | 8260          |   | 10700            |   | 140            | -1746         |      | P |
| Lead      | mg/Kg | 75 - 125               | 77.4          |   | 42.2             |   | 46.5           | 76            |      | P |
| Magnesium | mg/Kg | 75 - 125               | 1410          |   | 1480             |   | 93.0           | -71           |      | P |
| Manganese | mg/Kg | 75 - 125               | 294           |   | 302              |   | 9.3            | -84           |      | P |
| Nickel    | mg/Kg | 75 - 125               | 27.7          |   | 9.50             |   | 23.2           | 78            |      | P |
| Potassium | mg/Kg | 75 - 125               | 852           |   | 561              |   | 460            | 63            | N    | P |
| Selenium  | mg/Kg | 75 - 125               | 62.7          |   | 0.95             | U | 93.0           | 67            | N    | P |
| Silver    | mg/Kg | 75 - 125               | 2.87          |   | 0.37             | J | 3.5            | 71            | N    | P |
| Sodium    | mg/Kg | 75 - 125               | 303           |   | 235              |   | 140            | 48            | N    | P |
| Thallium  | mg/Kg | 75 - 125               | 80.7          |   | 1.90             | U | 93.0           | 87            |      | P |
| Vanadium  | mg/Kg | 75 - 125               | 21.6          |   | 14.8             |   | 13.9           | 49            | N    | P |
| Zinc      | mg/Kg | 75 - 125               | 56.1          |   | 48.8             |   | 9.3            | 79            |      | P |

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**MATRIX SPIKE SUMMARY**

**client:** Kleinfelder **level:** low **sdg no.:** Q2807  
**contract:** POWE02 **lab code:** ACE  
**matrix:** Solid **sample id:** Q2807-03 **client id:** COMP-6MS  
**Percent Solids for Sample:** 83.6 **Spiked ID:** Q2807-03MS **Percent Solids for Spike Sample:** 83.6

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M  |
|---------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|----|
| Mercury | mg/Kg | 80 - 120               | 2.00             | D | 2.26             | D | 0.32           | -80           |      | CV |

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**MATRIX SPIKE DUPLICATE SUMMARY**

|                                   |                    |                   |                 |                                         |                  |
|-----------------------------------|--------------------|-------------------|-----------------|-----------------------------------------|------------------|
| <b>client:</b>                    | <u>Kleinfelder</u> | <b>level:</b>     | <u>low</u>      | <b>sdg no.:</b>                         | <u>Q2807</u>     |
| <b>contract:</b>                  | <u>POWE02</u>      |                   |                 | <b>lab code:</b>                        | <u>ACE</u>       |
| <b>matrix:</b>                    | <u>Solid</u>       | <b>sample id:</b> | <u>Q2807-03</u> | <b>client id:</b>                       | <u>COMP-6MSD</u> |
| <b>Percent Solids for Sample:</b> | 83.6               | <b>Spiked ID:</b> | Q2807-03MSD     | <b>Percent Solids for Spike Sample:</b> | 83.6             |

| Analyte | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M  |
|---------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|----|
| Mercury | mg/Kg | 80 - 120               | 1.61          | D | 2.26             | D | 0.29           | -222          |      | CV |