

**metals**  
**- 5a -**  
**MATRIX SPIKE SUMMARY**

|                                             |                                     |                                                   |
|---------------------------------------------|-------------------------------------|---------------------------------------------------|
| <b>client:</b> <u>HDR, Inc.</u>             | <b>level:</b> <u>low</u>            | <b>sdg no.:</b> <u>Q3649</u>                      |
| <b>contract:</b> <u>HDRI08</u>              |                                     | <b>lab code:</b> <u>ACE</u>                       |
| <b>matrix:</b> <u>Water</u>                 | <b>sample id:</b> <u>Q3649-07</u>   | <b>client id:</b> <u>B4-0.0-0.5-20251114MS</u>    |
| <b>Percent Solids for Sample:</b> <u>NA</u> | <b>Spiked ID:</b> <u>Q3649-07MS</u> | <b>Percent Solids for Spike Sample:</b> <u>NA</u> |

| Analyte  | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M  |
|----------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|----|
| Arsenic  | ug/L  | 75 - 125               | 3990             |   | 100              | U | 4000           | 100           |      | P  |
| Barium   | ug/L  | 75 - 125               | 2120             |   | 1070             |   | 1000           | 104           |      | P  |
| Cadmium  | ug/L  | 75 - 125               | 948              |   | 30.0             | U | 1000           | 95            |      | P  |
| Chromium | ug/L  | 75 - 125               | 2170             |   | 43.9             | J | 2000           | 106           |      | P  |
| Lead     | ug/L  | 75 - 125               | 4550             |   | 60.0             | U | 5000           | 91            |      | P  |
| Mercury  | ug/L  | 75 - 125               | 38.3             |   | 2.00             | U | 40.0           | 96            |      | CV |
| Selenium | ug/L  | 75 - 125               | 9750             |   | 100              | U | 10000          | 98            |      | P  |
| Silver   | ug/L  | 75 - 125               | 374              |   | 50.0             | U | 380            | 98            |      | P  |

**metals**  
**- 5a -**  
**MATRIX SPIKE DUPLICATE SUMMARY**

|                                             |                                      |                                                   |
|---------------------------------------------|--------------------------------------|---------------------------------------------------|
| <b>client:</b> <u>HDR, Inc.</u>             | <b>level:</b> <u>low</u>             | <b>sdg no.:</b> <u>Q3649</u>                      |
| <b>contract:</b> <u>HDRI08</u>              |                                      | <b>lab code:</b> <u>ACE</u>                       |
| <b>matrix:</b> <u>Water</u>                 | <b>sample id:</b> <u>Q3649-07</u>    | <b>client id:</b> <u>B4-0.0-0.5-20251114MSD</u>   |
| <b>Percent Solids for Sample:</b> <u>NA</u> | <b>Spiked ID:</b> <u>Q3649-07MSD</u> | <b>Percent Solids for Spike Sample:</b> <u>NA</u> |

| Analyte  | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M  |
|----------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|----|
| Arsenic  | ug/L  | 75 - 125               | 3900          |   | 100              | U | 4000           | 98            |      | P  |
| Barium   | ug/L  | 75 - 125               | 2230          |   | 1070             |   | 1000           | 115           |      | P  |
| Cadmium  | ug/L  | 75 - 125               | 939           |   | 30.0             | U | 1000           | 94            |      | P  |
| Chromium | ug/L  | 75 - 125               | 2220          |   | 43.9             | J | 2000           | 109           |      | P  |
| Lead     | ug/L  | 75 - 125               | 4500          |   | 60.0             | U | 5000           | 90            |      | P  |
| Mercury  | ug/L  | 75 - 125               | 37.4          |   | 2.00             | U | 40.0           | 94            |      | CV |
| Selenium | ug/L  | 75 - 125               | 9570          |   | 100              | U | 10000          | 96            |      | P  |
| Silver   | ug/L  | 75 - 125               | 370           |   | 50.0             | U | 380            | 97            |      | P  |