

CAMECO RESOURCES
CROW BUTTE OPERATION

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(308) 665-2215
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July 10, 2015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

ATTN: Document Control Desk Director,
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Source Materials License SUA-1534
 Docket No. 40-8943
 Monitor Well Excursion – SM8-6

Dear Document Control Desk Director:

On May 19, 2015, during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM8-6, the multiple parameter upper control limit (MCL) for chloride and the single parameter upper control limit (SCL) for conductivity was exceeded. As required by License Condition 11.5 of Source Materials License SUA-1534, a second sample was collected from SM8-6 within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample exceeded the single parameter upper control limit (SCL) for conductivity.

In accordance with License Condition 11.5, CBO increased the sampling frequency for SM8-6 to weekly. Weekly samples were obtained from May 19, 2015, to July 7, 2015. The samples collected on June 23, June 30, and July 7, 2015, were below the excursion criteria from License Condition 11.5. Based on these results, CBO is removing SM8-6 from excursion status. In accordance with the requirements of Nebraska Department of Environmental Quality (NDEQ) Underground Injection Permit NE0122611, Section B.1, weekly sampling will continue for an additional three weeks. If the excursion monitoring parameters are not exceeded then biweekly sampling will resume. Attached are copies of the analytical data for each of the last three weekly samples and graphs for each parameter covering the period of December 16, 2015 through July 7, 2015.

NMS801

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CROW BUTTE OPERATION



Document Control Desk Director

July 10, 2015

Page 2

If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215 ext 114.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Larry Teahon
SHEQ Manager

Enclosures: As Stated

cc: NRC – Deputy Director
CBO - File
ec: CR – Casper



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 06/23/2015

Analysis Date: 06/23/2015

| Well ID | Alkalinity (mg/L) | Alk SCL | Alk MCL | Conductivity (µMho/cm) | Cond SCL | Cond MCL | Chloride (mg/L) | Cl SCL | Cl MCL |
|----------|----------------------|---------|---------|---------------------------|----------|----------|--------------------|--------|--------|
| SM07-023 | 178 | 278 | 232 | 459 | 850 | 708 | 3.9 | 59 | 50 |
| SM07-024 | 189 | 259 | 216 | 583 | 809 | 674 | 8.3 | 45 | 37 |
| SM07-025 | 158 | 202 | 168 | 368 | 645 | 538 | 3 | 52 | 44 |
| SM08-005 | 275 | 346 | 288 | 704 | 749 | 624 | 22 | 23 | 19 |
| SM08-006 | 253 | 328 | 274 | 697 | 734 | 612 | 18 | 23 | 19 |
| SM08-028 | 274 | 328 | 274 | 840 | 801 | 667 | 13 | 24 | 20 |
| SM10-016 | 256 | 382 | 318 | 586 | 850 | 708 | 9.9 | 28 | 23 |
| SM10-017 | 248 | 374 | 312 | 566 | 835 | 696 | 10 | 28 | 23 |
| SM10-018 | 240 | 346 | 288 | 543 | 763 | 636 | 8.6 | 24 | 20 |
| SM10-019 | 240 | 369 | 307 | 565 | 778 | 648 | 11 | 25 | 21 |
| SM10-020 | 234 | 360 | 300 | 600 | 792 | 660 | 25 | 27 | 22 |
| SM10-022 | 240 | 360 | 300 | 560 | 778 | 648 | 11 | 23 | 20 |



WJ

Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 06/30/2015

Analysis Date: 06/30/2015

| Well ID | Alkalinity (mg/L) | Alk SCL | Alk MCL | Conductivity (μMho/cm) | Cond SCL | Cond MCL | Chloride (mg/L) | Cl SCL | Cl MCL |
|-----------|----------------------|---------|---------|---------------------------|----------|----------|--------------------|--------|--------|
| CM06-009 | 287 | 428 | 356 | 1918 | 2866 | 2388 | 171 | 285 | 238 |
| CM06-010 | 300 | 429 | 358 | 1932 | 2952 | 2460 | 177 | 327 | 272 |
| CM08-001 | 290 | 455 | 379 | 1940 | 3110 | 2592 | 177 | 372 | 310 |
| CM08-002 | 302 | 395 | 329 | 1918 | 3125 | 2604 | 180 | 334 | 278 |
| CM08-003 | 299 | 432 | 360 | 1919 | 3211 | 2676 | 179 | 367 | 306 |
| CM08-004 | 297 | 428 | 356 | 1910 | 3125 | 2604 | 179 | 328 | 274 |
| CM08-005 | 292 | 425 | 354 | 1904 | 3067 | 2556 | 178 | 328 | 274 |
| CM08-006 | 305 | 432 | 360 | 1899 | 3067 | 2556 | 178 | 317 | 264 |
| CM08-007 | 306 | 425 | 354 | 1891 | 3154 | 2628 | 178 | 396 | 330 |
| CM08-008 | 310 | 418 | 348 | 1879 | 3211 | 2676 | 178 | 415 | 346 |
| CM08-009 | 316 | 452 | 377 | 1863 | 3053 | 2544 | 172 | 325 | 271 |
| CM09-008 | 299 | 418 | 348 | 1810 | 2952 | 2460 | 172 | 366 | 305 |
| CM09-009 | 305 | 475 | 396 | 1789 | 2923 | 2436 | 174 | 334 | 278 |
| CM09-010 | 303 | 359 | 299 | 1768 | 2390 | 1992 | 175 | 292 | 244 |
| CM09-011 | 304 | 445 | 371 | 1797 | 2707 | 2256 | 174 | 284 | 236 |
| CM11-012 | 305 | 433 | 361 | 1799 | 2794 | 2328 | 169 | 268 | 223 |
| CM11-013 | 302 | 418 | 348 | 1804 | 2722 | 2268 | 177 | 291 | 242 |
| CM11-014 | 315 | 468 | 390 | 1851 | 3024 | 2520 | 180 | 357 | 298 |
| CM11-015 | 303 | 431 | 359 | 1782 | 2765 | 2304 | 172 | 289 | 241 |
| CM11-016 | 303 | 451 | 376 | 1769 | 2794 | 2328 | 175 | 276 | 230 |
| CM11-017 | 304 | 438 | 365 | 1774 | 2837 | 2364 | 171 | 301 | 251 |
| CM11-018 | 318 | 445 | 371 | 1830 | 2722 | 2268 | 176 | 297 | 247 |
| CM11-019 | 305 | 448 | 373 | 1789 | 2779 | 2316 | 173 | 300 | 250 |
| SM04-001 | 161 | 248 | 206 | 370 | 772 | 643 | 2.7 | 52 | 43 |
| SM04-002 | 194 | 513 | 393 | 640 | 1256 | 1039 | 14 | 127 | 88 |
| SM04-005A | 199 | 367 | 306 | 538 | 1236 | 1030 | 11 | 106 | 88 |
| SM08-001 | 240 | 374 | 312 | 536 | 763 | 636 | 7.7 | 25 | 21 |
| SM08-002 | 241 | 353 | 294 | 541 | 778 | 648 | 5.9 | 24 | 20 |
| SM08-003 | 240 | 331 | 276 | 552 | 720 | 600 | 7.1 | 24 | 20 |
| SM08-004 | 236 | 323 | 269 | 560 | 819 | 683 | 12 | 25 | 21 |
| SM08-005 | 278 | 346 | 288 | 690 | 749 | 624 | 20 | 23 | 19 |
| SM08-006 | 256 | 328 | 274 | 687 | 734 | 612 | 18 | 23 | 19 |



Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 07/07/2015

Analysis Date: 07/07/2015

| Well ID | Alkalinity (mg/L) | Alk SCL | Alk MCL | Conductivity (µMho/cm) | Cond SCL | Cond MCL | Chloride (mg/L) | Cl SCL | Cl MCL |
|----------|----------------------|---------|---------|---------------------------|----------|----------|--------------------|--------|--------|
| SM07-023 | 179 | 278 | 232 | 455 | 850 | 708 | 3.8 | 59 | 50 |
| SM07-024 | 188 | 259 | 216 | 577 | 809 | 674 | 8.2 | 45 | 37 |
| SM07-025 | 158 | 202 | 168 | 365 | 645 | 538 | 3.1 | 52 | 44 |
| SM08-005 | 279 | 346 | 288 | 690 | 749 | 624 | 20 | 23 | 19 |
| SM08-006 | 259 | 328 | 274 | 711 | 734 | 612 | 19 | 23 | 19 |
| SM10-016 | 257 | 382 | 318 | 582 | 850 | 708 | 10 | 28 | 23 |
| SM10-017 | 248 | 374 | 312 | 561 | 835 | 696 | 10 | 28 | 23 |
| SM10-018 | 240 | 346 | 288 | 538 | 763 | 636 | 8.7 | 24 | 20 |
| SM10-019 | 242 | 369 | 307 | 561 | 778 | 648 | 11 | 25 | 21 |
| SM10-020 | 236 | 360 | 300 | 592 | 792 | 660 | 23 | 27 | 22 |
| SM10-022 | 241 | 360 | 300 | 555 | 778 | 648 | 11 | 23 | 20 |

SM08-006



