

**CJ Interim Completion Report – Addendum L**  
**Appendix A. Construction Verification Data**  
**Contents**

Section	Page
<b>A2. RRM</b>	
Standard Proctor Test Results Summary .....	A2-1
Lift Approval Summaries .....	A2-2
Lift Approval Package .....	A2-24
Top of Waste Buyoff Survey .....	A2-30
<b>A3. Interim Cover</b>	
Standard Proctor Test Results Summary .....	A3-1
Lift Approval Summaries .....	A3-2
Lift Approval Package .....	A3-3
Buyoff Surveys .....	A3-6

**NOTE:** Appendices A1 and A4 through A8 are not included as they are not relevant to the period covered in this Addendum.

**Appendix A2.  
RRM**

**Standard Proctor Test Results Summary  
Lift Approval Summaries  
Lift Approval Package  
Top of Waste Buyoff Surveys**

## Appendix A2. RRM Standard Proctor Test Results Summary

<b>Proctor ID #</b>	<b>Date sampled</b>	<b>Date Approved</b>	<b>Maximum Dry Density (lb/ft<sup>3</sup>)</b>	<b>Optimum Moisture Content %</b>	<b>Proctor Description</b>
RRM # 368 (Set # 121)	3/7/2013	3/28/2013	117.5	13.7	Reddish brown (5YR5/3) very fine to medium, well graded, sub round sand.
DB4-20200422	4/22/2020	6/2/2020	107.8	17.9	Sandy, lean clay (CL)
NWL-20200422	4/22/2020	6/2/2020	103.9	15.8	Silty sand (SM)
DB3-20200422	4/22/2020	6/8/2020	110.0	16.1	Sandy, lean clay (CL)
DB6-20200422	4/22/2020	6/8/2020	110.3	17.4	Sandy, lean clay (CL)
DB5-20210408	4/8/2021	5/5/2021	108.5	16.8	Sandy, lean clay (CL)
DB4-20210707	7/7/2021	7/26/2021	108	17.5	Sandy, lean clay (CL)
DB6-20210707	7/7/2021	7/26/2021	105.7	18.6	Sandy, lean clay (CL)

## Appendix A2. RRM Lift Approval Summaries

October 2021										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
10/04/21	UW2K09210930-00	N/A	1543	1,543	98.7	0.9	N/A	N/A	N/A	N/A
10/06/21	UW2K09211004-00	N/A	1641	3,184	100.0	0.9	N/A	N/A	N/A	N/A
10/07/21	UW2F01211004-00	N/A	1298	4,482	99.9	0.9	N/A	N/A	N/A	N/A
10/07/21	UW2E5N211004-00	N/A	1026	5,508	100.0	0.8	N/A	N/A	N/A	N/A
10/11/21	UW2H01211005-00	N/A	1367	6,875	99.3	1.0	N/A	N/A	N/A	N/A
10/11/21	UW2G5N211005-00	N/A	1132	8,007	99.6	0.9	N/A	N/A	N/A	N/A
10/11/21	UW2J01211007-00	N/A	1362	9,369	99.9	1.0	N/A	N/A	N/A	N/A
10/11/21	UW2I5N211007-00	1	1321	10,690	100.0	1.0	DB4-20210707	N/A	N/A	N/A
10/12/21	UW2E5N211011-00	N/A	1089	11,779	99.8	0.9	N/A	N/A	N/A	N/A
10/12/21	UW2A18210929-00	1	3481	15,260	N/A	1.8	DB4-20210707	N/A	N/A	N/A
10/14/21	UW2I5N211011-00	1	1365	16,625	99.4	1.0	DB4-20210707	N/A	N/A	N/A
10/14/21	UW2G5N211011-00	N/A	969	17,594	100.0	0.8	N/A	N/A	N/A	N/A
10/18/21	UW2I5N211018-00	N/A	1187	18,781	100.0	1.0	N/A	N/A	N/A	N/A
10/18/21	UW2A10211013-00	N/A	1772	20,553	99.8	0.9	N/A	N/A	N/A	N/A
10/18/21	UW2E5N211014-00	N/A	1161	21,714	98.9	0.9	N/A	N/A	N/A	N/A
10/19/21	UW2L08211012-00	N/A	872	22,586	99.9	1.0	N/A	N/A	N/A	N/A
10/19/21	UW2G5N211014-00	N/A	1211	23,797	100.0	1.0	N/A	N/A	N/A	N/A
10/19/21	UW2J09211012-00	N/A	963	24,760	98.8	1.0	N/A	N/A	N/A	N/A
10/20/21	UW2G5N211020-00	1	1218	25,978	100.0	1.0	DB4-20210707	N/A	N/A	N/A
10/20/21	UW2E5N211018-00	N/A	1191	27,169	100.0	1.0	N/A	N/A	N/A	N/A
10/20/21	UW2I5N211020-00	N/A	1121	28,290	99.2	0.9	N/A	N/A	N/A	N/A
10/21/21	UW2G5N211021-00	N/A	1096	29,386	99.9	0.9	N/A	N/A	N/A	N/A
10/21/21	UW1U22211019-00	N/A	886	30,272	N/A	1.9	N/A	N/A	N/A	N/A
10/21/21	UW2E5N211020-00	N/A	1155	31,427	99.8	0.9	N/A	N/A	N/A	N/A
10/21/21	UW2I5N211021-00	N/A	1153	32,580	98.3	0.9	N/A	N/A	N/A	N/A
10/25/21	UW2G5N211021-01	N/A	1123	33,703	99.0	1.0	N/A	N/A	N/A	N/A
10/25/21	UW2E5N211021-00	N/A	1082	34,785	99.9	0.9	N/A	N/A	N/A	N/A
10/26/21	UW1U22211026-00	N/A	426	35,211	100.0	0.9	N/A	N/A	N/A	N/A
10/26/21	UW2A18211019-00	N/A	1728	36,939	99.9	0.9	N/A	N/A	N/A	N/A
10/27/21	UW1U22211027-00	N/A	498	37,437	99.4	1.0	N/A	N/A	N/A	N/A
10/27/21	UW2I5N211021-00	N/A	962	38,399	99.8	0.9	N/A	N/A	N/A	N/A
10/28/21	UW2F01211020-00	N/A	1187	39,586	99.1	0.9	N/A	N/A	N/A	N/A
10/28/21	UW2F26211026-00	N/A	2661	42,247	N/A	1.8	N/A	N/A	N/A	N/A
<p><b>Average CBCS Screen Passing Pixels (%) = 99.6</b></p> <p><b>Total Quantity Approved (yd<sup>3</sup>) = 42,247</b></p> <p><b>Total # of Nuclear Density Gauge Tests = 0</b></p> <p><b>Total # of Moisture Tests = 4</b></p> <p><b>Quantity per Moisture Test (yd<sup>3</sup>) = 10,562</b></p> <p><b>Total Average Thickness (ft) = 1.0</b></p>										

## Appendix A2. RRM Lift Approval Summaries (continued)

CBCS screen shot example from October 2021. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.



## Appendix A2. RRM Lift Approval Summaries

November 2021										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
11/03/21	UW2E5N211028-00	2	1173	1,173	N/A	1.0	DB6-20210707	1	N/A	90.6
11/04/21	UW2G5N211028-00	1	1010	2,183	N/A	0.9	DB6-20210707	1	N/A	91.7
11/04/21	UW2I5N211101-00	1	907	3,090	N/A	0.9	DB6-20210707	1	N/A	91
11/04/21	UW2H01211101-00	1	1056	4,146	N/A	0.9	DB6-20210707	1	N/A	90.6
11/04/21	UW2J01211101-00	1	1,066	5,212	N/A	1.0	DB6-20210707	1	N/A	91.5
11/08/21	UW2E5N211104-00	1	956	6,168	N/A	0.8	DB6-20210707	1	N/A	95.3
11/09/21	UW2I5N211108-00	1	860	7,028	N/A	0.8	DB6-20210707	N/A	1	91.2
11/09/21	UW1U22211028-00	1	474	7,502	N/A	1.0	DB6-20210707	1	N/A	93.2
11/09/21	UW2J09211103-00	1	839	8,341	N/A	1.0	DB6-20210707	1	N/A	95.1
11/09/21	UW2L08211103-00	1	848	9,189	N/A	1.1	DB6-20210707	1	N/A	92.7
11/09/21	UW2G5N211108-00	1	909	10,098	N/A	0.8	DB6-20210707	1	N/A	95.1
11/10/21	UW2H01211109-00	1	957	11,055	N/A	0.8	DB6-20210707	1	N/A	89.7
11/10/21	UW2F01211104-00	1	1369	12,424	N/A	1.0	DB6-20210707	1	N/A	92.7
11/10/21	UW2G09211104-00	1	894	13,318	N/A	1.0	DB6-20210707	1	N/A	93.9
11/10/21	UW2F01211108-00	1	1117	14,435	N/A	0.8	DB6-20210707	1	N/A	92.7
11/10/21	UW2F01211110-00	1	1173	15,608	N/A	0.9	DB6-20210707	1	N/A	93.7
11/10/21	UW2E5N211110-00	1	755	16,363	N/A	0.7	DB6-20210707	1	N/A	95.4
11/11/21	UW2G09211110-00	1	1007	17,370	N/A	0.8	DB6-20210707	1	N/A	93.1
11/11/21	UW2J01211109-00	1	962	18,332	N/A	0.9	DB6-20210707	1	N/A	92.6
11/15/21	UW2H01211110-00	1	959	19,291	N/A	0.9	DB6-20210707	1	N/A	98.8
11/16/21	UW2G5N211111-00	1	910	20,201	N/A	0.8	DB6-20210707	1	N/A	95
11/16/21	UW2G01211110-00	1	1041	21,242	N/A	0.9	DB6-20210707	1	N/A	94.2
11/16/21	UW2I09211111-00	1	1027	22,269	N/A	0.9	DB6-20210707	1	N/A	96.4
11/16/21	UW2K08211111-00	1	1112	23,381	N/A	1.0	DB6-20210707	1	N/A	93.8
11/17/21	UW2K08211115-00	1	1012	24,393	N/A	0.9	DB6-20210707	1	N/A	93.5
11/17/21	UW2I01211115-00	1	1127	25,520	N/A	0.9	DB6-20210707	1	N/A	91.5
11/17/21	UW2I5N211115-00	1	994	26,514	N/A	0.9	DB6-20210707	1	N/A	93.9
11/17/21	UW2F01211115-00	1	1141	27,655	N/A	0.9	DB6-20210707	1	N/A	92.7
11/18/21	UW2I01211117-00	1	1013	28,668	N/A	0.8	DB6-20210707	1	N/A	90.2
11/18/21	UW2F01211117-00	1	1118	29,786	N/A	0.9	DB6-20210707	1	N/A	94.2
11/18/21	UW2E3N211116-00	1	960	30,746	N/A	0.8	DB6-20210707	1	N/A	91.4
11/18/21	UW2G01211116-00	1	1,132	31,878	N/A	0.9	DB6-20210707	1	N/A	90.2

## Appendix A2. RRM Lift Approval Summaries (*continued*)

November 2021										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
11/22/21	UW1Z18211027-00	1	2,018	33,896	N/A	1.0	DB6-20210707	N/A	1	91.1
11/22/21	UW2E3N211118-00	1	1,807	35,703	N/A	0.9	DB6-20210707	1	N/A	93.9
11/24/21	UW2G01211118-00	1	1,186	36,889	N/A	1.0	DB6-20210707	1	N/A	94.5
11/24/21	UW2E3N211122-00	1	1,857	38,746	N/A	0.9	DB6-20210707	1	N/A	96.4
11/24/21	UW2F01211123-00	1	1,168	39,914	N/A	0.9	DB6-20210707	1	N/A	93.4
11/24/21	UW2G09211123-00	1	1,234	41,148	N/A	1.0	DB6-20210707	1	N/A	94.4
11/24/21	UW2I01211122-00	1	910	42,058	N/A	0.7	DB6-20210707	1	N/A	92.9
11/24/21	UW2I09211123-00	1	1090	43,148	N/A	1.0	DB6-20210707	1	N/A	92.8
11/29/21	UW2K08211124-00	1	1117	44,265	N/A	1.0	DB6-20210707	1	N/A	93.3
11/29/21	UW2I01121124-00	1	1225	45,490	N/A	1.0	DB6-20210707	1	N/A	93.7
11/30/21	UW2G01211129-00	1	1083	46,573	N/A	0.9	DB6-20210707	1	N/A	93.6
11/30/21	UW2E3N211129-00	1	641	47,214	N/A	0.6	DB6-20210707	1	N/A	95.7
<p>Average CBCS Screen Passing Pixels (%) = N/A</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 47,214</p> <p>Total # of Nuclear Density Gauge Tests = 42</p> <p>Total # of Moisture Tests = 44</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 1,073</p> <p>Total Average Thickness (ft) = 0.9</p>										

***No Screen Shot - Computer Based Compaction System not used during November***

## Appendix A2. RRM Lift Approval Summaries (*continued*)

December 2021										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
12/06/21	UW2I01211202-00	1	1104	1,104	N/A	0.9	DB6-20210707	1	N/A	91.6
12/06/21	UW2G01211201-00	1	1025	2,129	N/A	0.9	DB6-20210707	1	N/A	98.6
12/06/21	UW2F01211201-00	1	1137	3,266	N/A	0.9	DB6-20210707	1	N/A	94.5
12/08/21	UW1S22211207-00	1	838	4,104	N/A	0.9	DB6-20210707	1	N/A	93.2
12/08/21	UW1Z18211206-00	1	1803	5,907	N/A	0.9	DB6-20210707	1	N/A	94.7
12/08/21	UW2G09211202-00	1	1159	7,066	N/A	0.9	DB6-20210707	1	N/A	93.0
12/08/21	UW2I09211202-00	1	1060	8,126	N/A	0.9	DB6-20210707	1	N/A	93.1
12/08/21	UW2K08211206-00	1	936	9,062	N/A	0.8	DB6-20210707	1	N/A	92.4
12/14/21	UW2E01211207-00	6	3884	12,946	N/A	2.0	NWL-20200422	6	N/A	94.2
12/16/21	UW2H00211213-00	6	3227	16,173	N/A	1.9	NWL-20200422	6	N/A	94.5
12/20/21	UW1Z18211209-00	6	3913	20,086	N/A	1.9	NWL-20200422	6	N/A	95.6
<p>Average CBCS Screen Passing Pixels (%) = N/A</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 20,086</p> <p>Total # of Nuclear Density Gauge Tests = 26</p> <p>Total # of Moisture Tests = 26</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 773</p> <p>Total Average Thickness (ft) = 1.2</p>										

***No Screen Shot - Computer Based Compaction System not used during December***



## Appendix A2. RRM Lift Approval Summaries (*continued*)

January 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
01/04/22	UW2E5N211220-00	6	5054	5,054	N/A	1.9	NWL20200422	6	N/A	94.8
01/10/22	UW2K08220110-00	3	2060	7,114	N/A	1.9	NWL20200422	3	N/A	93
01/10/22	UW2M5N220106-00	NA	3812	10,926	N/A	1.9	N/A	N/A	N/A	N/A
01/12/22	UW2I08220110-00	3	2396	13,322	N/A	1.9	NWL20200422	3	N/A	95.4
01/13/22	UW2E5N220105-00	6	2793	16,115	N/A	1.0	NWL20200422	6	N/A	94.9
01/13/22	UW2K08220112-00	3	2202	18,317	N/A	2.0	NWL20200422	3	N/A	96.8
01/18/22	UW2E01211214-00	6	3,683	22,000	N/A	1.9	NWL20200422	6	N/A	95
01/18/22	UW2I08220112-00	3	2,463	24,463	N/A	2.0	DB6-20210707	3	N/A	95
01/19/22	UW2K08220117-00	3	2,171	26,634	N/A	2.0	DB6-20210707	3	N/A	95.4
01/19/22	UW1S22211215-00	3	1,822	28,456	N/A	2.0	DB6-20210707	3	N/A	91.4
01/24/22	UW2E01221218-00	6	3,834	32,290	N/A	1.9	DB3-20200422	6	N/A	92.2
01/24/22	UW2E5N220113-00	6	5,446	37,736	N/A	2.0	DB3-20200422	6	N/A	92.5
01/25/22	UW2G0921221-00	3	2,403	40,139	N/A	1.9	DB5-20210408	3	N/A	95.5
01/25/22	UW2I08220124-00	3	2,403	42,542	N/A	1.9	DB6-20210707	3	N/A	94.1
01/27/22	UW2H00211216-00	6	3,259	45,801	N/A	1.9	DB6-20210707	6	N/A	95.9
01/31/22	UW2E1N220125-00	6	4,087	49,888	N/A	2.0	DB3-20200422	6	N/A	92.6
<p>Average CBCS Screen Passing Pixels (%) = N/A</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 49,888</p> <p>Total # of Nuclear Density Gauge Tests = 66</p> <p>Total # of Moisture Tests = 66</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 756</p> <p>Total Average Thickness (ft) = 1.9</p>										

***No Screen Shot - Computer Based Compaction System not used during January***

## Appendix A2. RRM Lift Approval Summaries (*continued*)

February 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
02/01/22	UW2F08220201-00	3	2,473	2,473	N/A	2.0	DB3-20200422	3	1	93.7
02/03/22	UW2G1N220127-00	6	4185	6,658	N/A	1.9	DB3-20200422 NWL-20200422	6	N/A	96
02/03/22	UW2E1N220202-00	6	3365	10,023	N/A	1.7	DB3-20200422 NWL-20200422	6	N/A	92.8
02/09/22	UW2E1N220208-00	6	3,858	13,881	N/A	1.9	DB3-20200422 NWL-20200422	6	N/A	92.7
02/09/22	UW2G1N220203-00	6	4315	18,196	N/A	2.0	NWL-20200422	6	N/A	94.7
02/10/22	UW2F08220209-00	3	2422	20,618	N/A	1.9	NWL-20200422	3	N/A	94.9
02/15/22	UW1Z17220210-00	6	4126	24,744	N/A	1.8	NWL-20200422	6	N/A	97.9
02/16/22	UW1S22220214-00	3	1612	26,356	N/A	1.7	DB3-20200422	3	N/A	94.6
02/21/22	UW2E1N220216-00	6	2541	28,897	N/A	2.0	DB3-20200422 NWL-20200422	6	N/A	92.9
02/21/22	UW2G1N220215-00	6	4323	33,220	N/A	2.0	NWL-20200422	6	N/A	97.1
02/22/22	UW2G1N220221-00	3	2187	35,407	100.0	2.0	NWL-20200422	3	N/A	96.4
02/24/22	UW2E1N220222-00	3	1025	36,432	99.8	1.8	NWL-20200422	3	N/A	94.2
<p><b>Average CBCS Screen Passing Pixels (%) = 99.9</b></p> <p><b>Total Quantity Approved (yd<sup>3</sup>) = 36,432</b></p> <p><b>Total # of Nuclear Density Gauge Tests = 57</b></p> <p><b>Total # of Moisture Tests = 57</b></p> <p><b>Quantity per Moisture Test (yd<sup>3</sup>) = 639</b></p> <p><b>Total Average Thickness (ft) = 1.9</b></p>										

## Appendix A2. RRM Lift Approval Summaries (continued)

CBCS screen shot example from February 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.

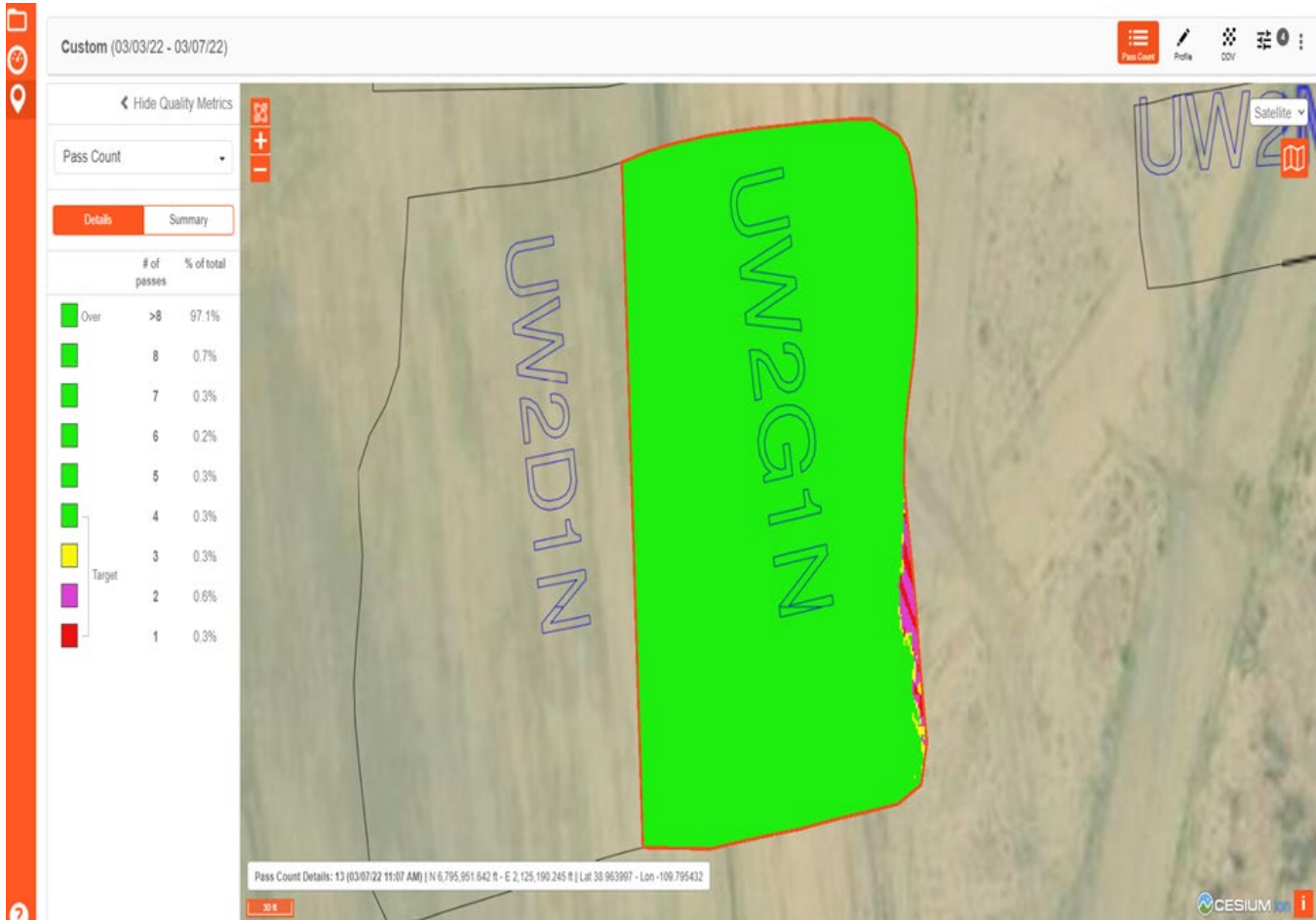


## Appendix A2. RRM Lift Approval Summaries (continued)

March 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
03/01/22	UW2G1N220222-00	3	725	725	99.6	1.5	NWL-20200422	3	N/A	93
03/01/22	UW2M5N220111-00	6	3575	4,300	99.9	2.0	NWL-20200422	6	N/A	94.2
03/02/22	UW2E1N220302-00	0	56	4,356	100.0	1.0	N/A	0	N/A	N/A
03/02/22	UW2G1N220302-00	0	201	4,557	99.8	1.0	N/A	0	N/A	N/A
03/03/22	UW2G1N220303-00	0	128	4,685	100.0	0.4	N/A	0	N/A	N/A
03/07/22	UW2D1N220303-00	6	2683	7,368	99.5	1.5	NWL-20200422	6	N/A	96.9
03/07/22	UW2G1N220303-01	6	2944	10,312	99.5	1.5	NWL-20200422	6	N/A	95.9
03/08/22	UW2D1N220307-00	6	3391	13,703	99.8	1.9	NWL-20200422	6	N/A	95.6
03/09/22	UW2G1N220308-00	6	3670	17,373	100.0	1.9	NWL-20200422	6	N/A	97.7
03/10/22	UW2D1N220309-00	6	3429	20,802	100.0	1.9	NWL-20200422	6	N/A	93.9
03/14/22	UW2G1N220310-00	6	3338	24,140	99.0	1.7	NWL-20200422	6	N/A	94.1
03/16/22	UW1Z17220224-00	6	4294	28,434	100.0	2.0	NWL-20200422	6	N/A	93.3
03/16/22	UW2D1N220314-00	6	2723	31,157	100.0	1.5	NWL-20200422	6	N/A	91.1
03/17/22	UW2G1N220316-00	6	2897	34,054	99.5	1.5	NWL-20200422	6	1	94.2
03/23/22	UW2I07220321-00	6	3,074	37,128	100.0	1.8	NWL-20200422	6	N/A	95.9
03/23/22	UW2F08220316-00	6	3578	40,706	100.0	1.9	NWL-20200422	6	N/A	94.7
03/23/22	UW1Z17220322-00	6	3911	44,617	99.0	1.8	NWL-20200422	6	N/A	97.5
03/29/22	UW2F08220323-00	6	3438	48,055	100.0	1.8	NWL-20200422	6	N/A	94.2
03/29/22	UW2I07220328-00	6	3184	51,239	99.5	1.9	NWL-20200422	6	N/A	97.3
03/31/22	UW1Z17220329-00	6	3948	55,187	100.0	1.8	NWL-20200422	6	N/A	94.6
<p><b>Average CBCS Screen Passing Pixels (%) = 99.8</b></p> <p><b>Total Quantity Approved (yd<sup>3</sup>) = 55,187</b></p> <p><b>Total # of Nuclear Density Gauge Tests = 99</b></p> <p><b>Total # of Moisture Tests = 99</b></p> <p><b>Quantity per Moisture Test (yd<sup>3</sup>) = 557</b></p> <p><b>Total Average Thickness (ft) = 1.6</b></p>										

## Appendix A2. RRM Lift Approval Summaries (continued)

CBCS screen shot example from March 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.

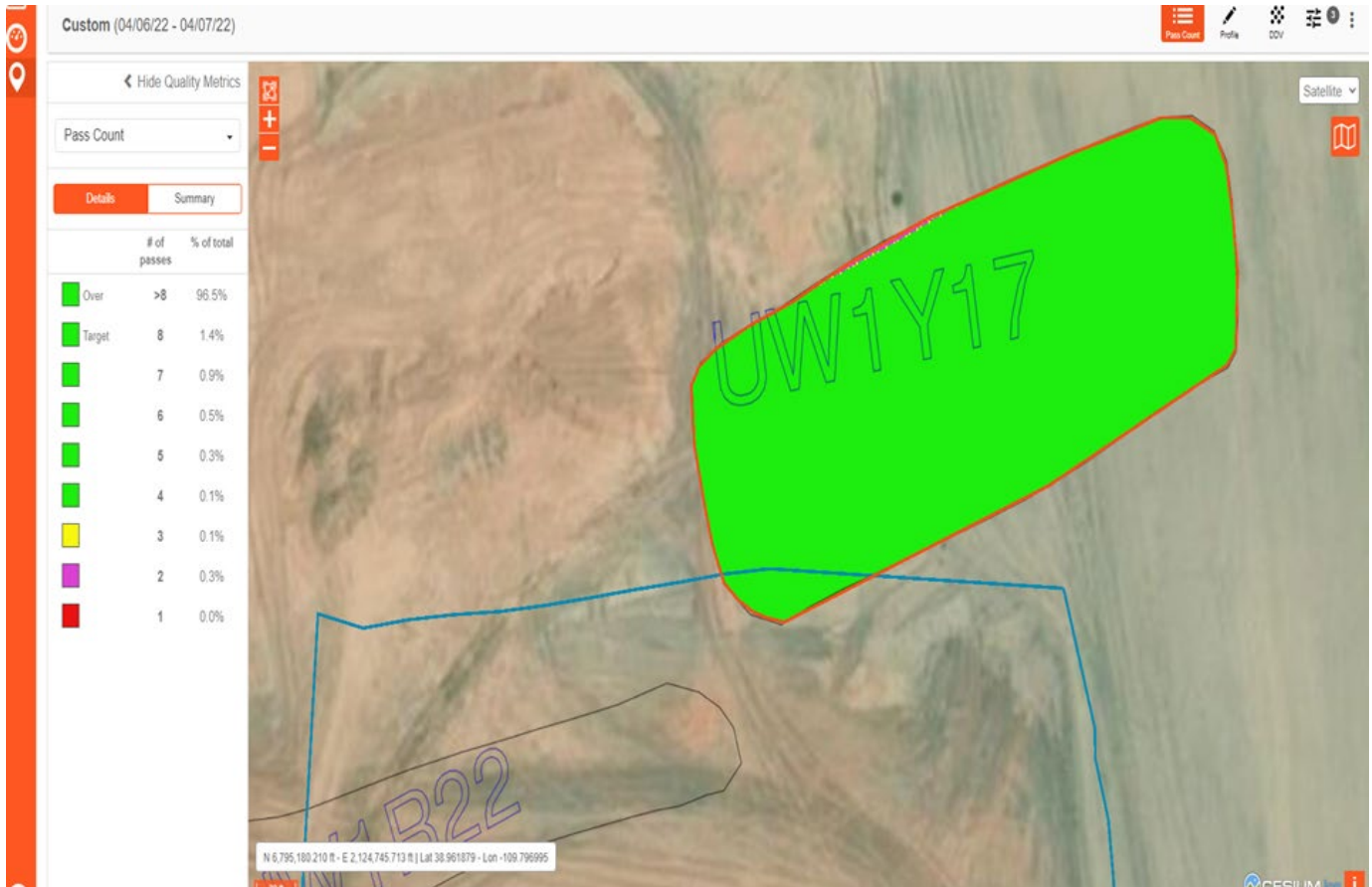


## Appendix A2. RRM Lift Approval Summaries (*continued*)

April 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
04/06/22	UW2F07220330-00	9	6829	6,829	100.0	1.8	NWL20200422	9	0	93.3
04/07/22	UW1Y17220405-00	6	3560	10,389	99.6	1.8	NWL20200422	6	0	93.9
04/12/22	UW2F07220406-00	9	6856	17,245	99.9	1.8	NWL20200422	9	0	95.9
04/13/22	UW1Y17220411-00	6	3614	20,859	100.0	1.8	NWL20200422	6	0	95.6
04/13/22	UW2E5N220127-00	1	1377	22,236	N/A	0.6	NWL20200422	1	0	97.1
04/19/22	UW2F07220413-00	9	6,473	28,709	99.8	1.7	NWL20200422	9	0	97.8
04/20/22	UW1Y17220418-00	6	3557	32,266	98.5	1.8	NWL20200422	6	0	98.9
04/21/22	UW1R22220420-00	6	2556	34,822	99.9	1.5	DB3-20200422	6	0	93.6
04/26/22	UW1Y17220421-00	6	3965	38,787	100.0	1.8	DB3-20200422	6	0	94.4
04/28/22	UW2E07220425-00	9	6453	45,240	99.9	1.8	DB3-20200422	9	0	92.6
<p>Average CBCS Screen Passing Pixels (%) = 99.7</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 45,240</p> <p>Total # of Nuclear Density Gauge Tests = 67</p> <p>Total # of Moisture Tests = 67</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 675</p> <p>Total Average Thickness (ft) = 1.6</p>										

## Appendix A2. RRM Lift Approval Summaries (*continued*)

CBCS screen shots example from April 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.



## Appendix A2. RRM Lift Approval Summaries (*continued*)

May 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
05/03/22	UW1X17220427-00	6	3906	3,906	100.0	1.9	DB3-20200422	6	0	93.4
05/05/22	UW2E07220502-00	9	6312	10,218	100.0	1.9	DB3-20200422	9	1	92.8
05/09/22	UW1X17220504-00	6	3765	13,983	99.8	1.8	DB3-20200422	6	0	91.9
05/11/22	UW2E07220509-00	9	6185	20,168	100.0	1.8	DB3-20200422	9	0	91.4
05/12/22	UW2D06220511-00	3	2149	22,317	99.5	1.8	DB3-20200422	3	0	92.0
05/17/22	UW2D06220516-00	3	2246	24,563	99.9	1.9	DB3-20200422	3	0	92.3
05/17/22	UWF06220512-00	3	2245	26,808	97.0	1.8	DB3-20200422	3	0	92.5
05/18/22	UW2I06220517-00	3	1904	28,712	99.3	1.8	DB3-20200422	3	0	92.0
05/19/22	UW2I06220519-00	3	1725	30,437	100.0	2.0	DB3-20200422	3	0	92.8
05/19/22	UWF06220518-00	3	2254	32,691	100.0	1.9	DB3-20200422	3	0	91.8
05/23/22	UW2D06220519-00	3	2354	35,045	100.0	1.9	DB3-20200422	3	0	93.1
05/24/22	UWF06220523-00	3	1994	37,039	100.0	1.9	DB3-20200422	3	0	93.1
05/25/22	UW2I06220524-00	3	1616	38,655	99.8	1.9	DB3-20200422	3	0	93.6
05/26/22	UW2D06220524-00	3	1790	40,445	100.0	1.5	DB3-20200422	3	0	92.7
05/31/22	UW2F06220525-00	3	1457	41,902	100.0	1.4	DB3-20200422	3	0	94.7
<p><b>Average CBCS Screen Passing Pixels (%) = 99.7</b></p> <p><b>Total Quantity Approved (yd<sup>3</sup>) = 41,902</b></p> <p><b>Total # of Nuclear Density Gauge Tests = 63</b></p> <p><b>Total # of Moisture Tests = 63</b></p> <p><b>Quantity per Moisture Test (yd<sup>3</sup>) = 665</b></p> <p><b>Total Average Thickness (ft) = 1.8</b></p>										



## Appendix A2. RRM Lift Approval Summaries (*continued*)

CBCS screen shot example from May 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.



## Appendix A2. RRM Lift Approval Summaries (continued)

June 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
06/01/22	UW2106220526-00	3	1019	1,019	100.0	1.2	DB3-20200422	3	0	93.7
06/01/22	UW2C06220531-00	3	2380	3,399	100.0	1.9	DB3-20200422	3	0	92.6
06/02/22	UW2E05220531-00	3	2246	5,645	100.0	1.8	DB3-20200422	3	0	92.8
06/02/22	UW2H05220601-00	3	1664	7,309	100.0	1.7	DB3-20200422	3	0	94.1
06/06/22	UW1X16220511-00	6	3840	11,149	99.6	1.8	DB3-20200422	6	0	91
06/07/22	UW2C06220602-00	3	2305	13,454	100.0	1.8	DB3-20200422	3	0	90.8
06/08/22	UW2E05220607-00	3	2321	15,775	100.0	1.8	DB3-20200422	3	1	95
06/08/22	UW2H05220608-00	3	1902	17,677	100.0	2.0	DB3-20200422	3	0	96.2
06/13/22	UW2C06220608-00	3	2400	20,077	100.0	1.9	DB3-20200422	3	0	95.1
06/14/22	UW2E05220613-00	3	2523	22,600	99.7	2.0	DB3-20200422	3	0	91.9
06/14/22	UW2H05220613-00	3	1,903	24,503	99.3	2.0	DB3-20200422	3	0	98
06/15/22	UW2C06220614-00	3	1,636	26,139	99.3	1.3	DB3-20200422	3	0	92.3
06/16/22	UW2E05220615-00	3	1397	27,536	99.8	1.1	DB3-20200422	3	0	100.6
06/16/22	UW2H05220615-00	3	1024	28,560	99.6	1.1	DB3-20200422	3	0	99.4
06/21/22	UW1X16220608-00	6	3806	32,366	99.9	1.7	DB3-20200422	6	0	99.5
06/23/22	UW1X16220622-00	6	4330	36,696	99.8	1.8	DB3-20200422	6	0	96.4
06/28/22	UW1X16220623-00	6	4,403	41,099	99.5	1.9	DB3-20200422	6	0	93.6
06/29/22	UW1X16220628-00	6	3,675	44,774	100.0	1.9	DB3-20200422	6	0	94.1
<p><b>Average CBCS Screen Passing Pixels (%) = 99.8</b></p> <p><b>Total Quantity Approved (yd<sup>3</sup>) = 44,774</b></p> <p><b>Total # of Nuclear Density Gauge Tests = 69</b></p> <p><b>Total # of Moisture Tests = 69</b></p> <p><b>Quantity per Moisture Test (yd<sup>3</sup>) = 649</b></p> <p><b>Total Average Thickness (ft) = 1.7</b></p>										

## Appendix A2. RRM Lift Approval Summaries (*continued*)

CBCS screen shot example from June 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.

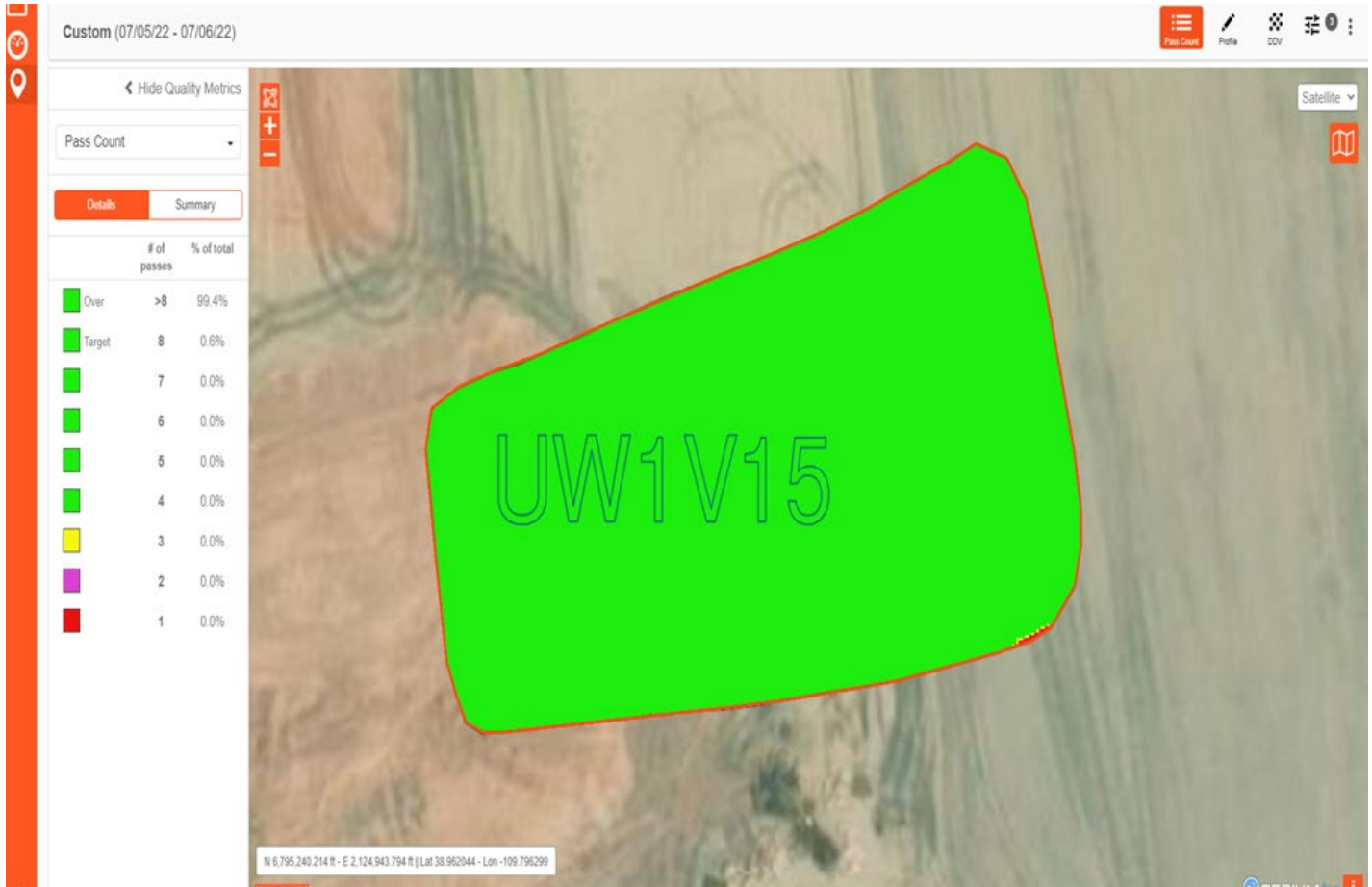


## Appendix A2. RRM Lift Approval Summaries (*continued*)

July 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
07/05/22	UW1X16220629-00	6	3556	3,556	99.6	1.9	DB3-20200422	6	0	93.5
07/06/22	UW1V15220705-00	6	3524	7,080	99.9	1.6	DB3-20200422	6	0	93.5
07/11/22	UW1V15220706-00	6	4137	11,217	100.0	1.9	DB3-20200422	6	0	98.9
07/12/22	UW1R22220711-00	6	2856	14,073	99.9	1.4	DB3-20200422	6	0	100.4
07/14/22	UW1V15220711-00	6	3912	17,985	100.0	1.8	DB3-20200422	6	0	95.6
07/18/22	UW1R22220713-00	6	1945	19,930	100.0	1.7	DB3-20200422	6	1	95.5
07/19/22	UW1R22220718-00	6	2,272	22,202	99.7	2.0	DB3-20200422	6	0	94.2
07/21/22	UW1R22220719-00	6	1976	24,178	99.5	1.7	DB3-20200422	6	0	93.5
07/26/22	UW1Q21220721-00	6	4,156	28,334	99.9	1.7	DB3-20200422	6	0	91.9
07/28/22	UW1Q21220726-00	6	4,544	32,878	99.9	1.9	DB3-20200422	6	0	92.7
<p>Average CBCS Screen Passing Pixels (%) = 99.8</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 32,878</p> <p>Total # of Nuclear Density Gauge Tests = 60</p> <p>Total # of Moisture Tests = 60</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 548</p> <p>Total Average Thickness (ft) = 1.8</p>										

## Appendix A2. RRM Lift Approval Summaries (*continued*)

CBCS screen shot example from July 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.



## Appendix A2. RRM Lift Approval Summaries (*continued*)

August 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
08/02/22	UW1Q21220728-00	6	4790	4,790	99.7	1.6	DB3-20200422	6	0	92.4
08/10/22	UW1Q21220802-00	9	5088	9,878	99.9	1.7	DB4-20200422	9	0	95.5
08/16/22	UW1V15220719-00	6	3403	13,281	100.0	1.6	RRM-368	6	0	94
08/22/22	UW1Q21220810-00	9	5,258	18,539	100.0	1.8	DB6-20200421	9	0	91.6
08/29/22	UW1Q21220822-00	0	5,588	24,127	99.3	1.9	N/A	0	0	0
08/30/22	UW2H16220802-00	0	1,293	25,420	N/A	1.8	N/A	N/A	N/A	N/A
08/31/22	UW2H16220830-00	0	1365	26,785	99.4	1.9	N/A	N/A	N/A	N/A
<p>Average CBCS Screen Passing Pixels (%) = 99.7</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 26,785</p> <p>Total # of Nuclear Density Gauge Tests = 30</p> <p>Total # of Moisture Tests = 30</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 893</p> <p>Total Average Thickness (ft) = 1.8</p>										

## Appendix A2. RRM Lift Approval Summaries (*continued*)

CBCS screen shot example from August 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.



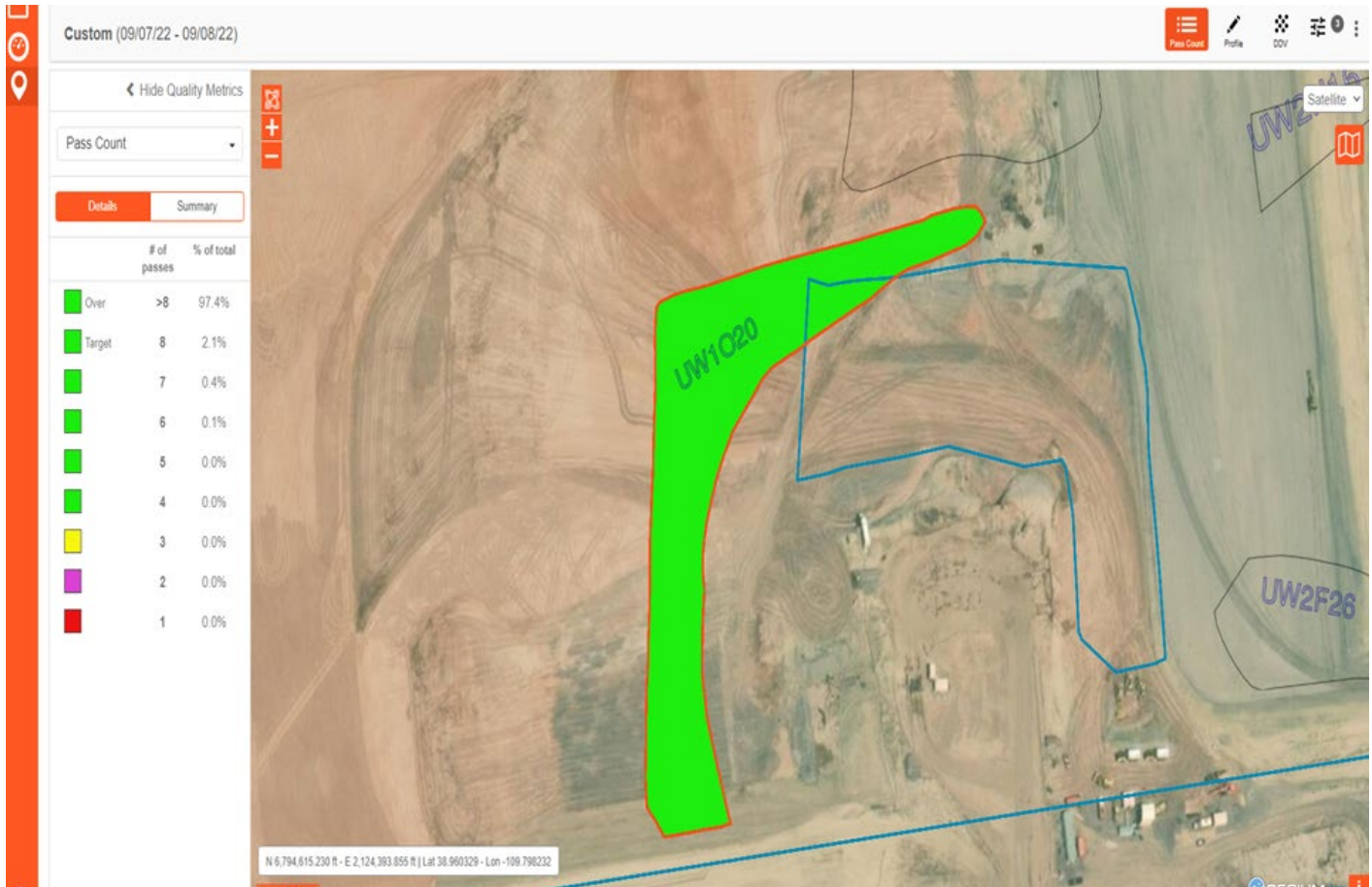
## Appendix A2. RRM Lift Approval Summaries (*continued*)

September 2022										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CBCS Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
09/01/22	UW1Q21220829-00	N/A	5517	5,517	99.9	1.9	N/A	0	0	N/A
09/08/22	UW1O20220901-00	N/A	7497	13,014	100.0	2.0	N/A	N/A	N/A	N/A
09/14/22	UW1O20220908-00	N/A	7083	20,097	99.8	1.9	N/A	N/A	N/A	N/A
09/19/22	UW2H16220914-00	N/A	1372	21,469	100.0	2.0	N/A	N/A	N/A	N/A
09/20/22	UW2H16220919-00	N/A	1418	22,887	99.9	2.0	N/A	N/A	N/A	N/A
09/26/22	UW2M5N220919-00	N/A	3745	26,632	99.8	1.9	N/A	N/A	N/A	N/A
09/27/22	UW1O20220914-00	N/A	7146	33,778	99.7	1.9	N/A	N/A	N/A	N/A
09/29/22	UW1O20220927-00	4	3989	37,767	100.0	1.1	NWL-20200422	4	N/A	93
<p>Average CBCS Screen Passing Pixels (%) = 99.9</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 37,767</p> <p>Total # of Nuclear Density Gauge Tests = 4</p> <p>Total # of Moisture Tests = 4</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 9,442</p> <p>Total Average Thickness (ft) = 1.8</p>										



## Appendix A2. RRM Lift Approval Summaries (*continued*)

CBCS screen shot example from September 2022. There are compaction screen shots for each lift approved on record. The number of passing pixels reported refers to the percentage of the lift which has green pixels. A green pixel verifies that the minimum of six-wheel passes with the compactor has been recorded.



# Appendix A2. RRM Lift Approval Package

## LIFT APPROVAL FORM

PROJECT:	<b>Moab UMTRA</b>	DATE:	<b>5/24/2022</b>
NW CORNER		OTHER	

P 1	SW Corner			
EW:	125	X	0.610	= 76
NS:	272	X	0.810	= 220
P 2				
EW:	X	=		
NS:	X	=		
P 3	N			
EW:	X	=		
NS:	X	=	A	
P 4				
EW:	X	=		
NS:	X	=		
P 5				
EW:	X	=		
NS:	X	=		
Page 2 attached:    Y    N				

IDENTIFY LOTS ABOVE

LIFT ID:	<b>UW2D06220524-00</b>	NW CORNER:	<b>6795666 N 2124884 E</b>
Uncompacted Thickness:	<b>1.5</b>	Compacted Thickness:	<b>N/A</b>
NW CORNER of debris placement:	<b>N/A</b>	Debris Insp. By:	<b>N/A</b>
Lift Area (ft <sup>2</sup> ):	<b>33,057</b>	Date:	<b>N/A</b>
Lift Volume (yd <sup>3</sup> ):	<b>1,790</b>	Time:	<b>N/A</b>

**Comments:** : QC visually confirmed that the lift area was scarified and moisture conditioned prior to placement. QC visually observed the material being placed to have proper moisture for compaction. QC verified material compaction using the CBCS and a Troxler gauge. QC conducting visual assessments throughout the shift. This lift was compacted with the 825H. RRM materials for this lift came from DB3-20200422.

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Attached Forms:    Grid Slope        Compaction Macro        Print Screen        Moisture/ Density   

KEYING IN NOTES:     N     E     S     W    **Satisfactory**    MOISTURE/ DENSITY TESTS ID # (S):    **P1**

LIFT APPROVED BY: **Tammy Hooker** *[Signature]*    DATE:    **5/26/2022**    TIME:    **1100**

*[Signature]*    **5/31/2022**  
 QA/QC APPROVAL    DATE

Density Testing  
 DOE-EM/GJRAC1783  
 Rev. 1

QC-F-001  
 File index No. 43.8.2  
 Page 1 of 6



## Appendix A2. RRM Lift Approval Package (continued)

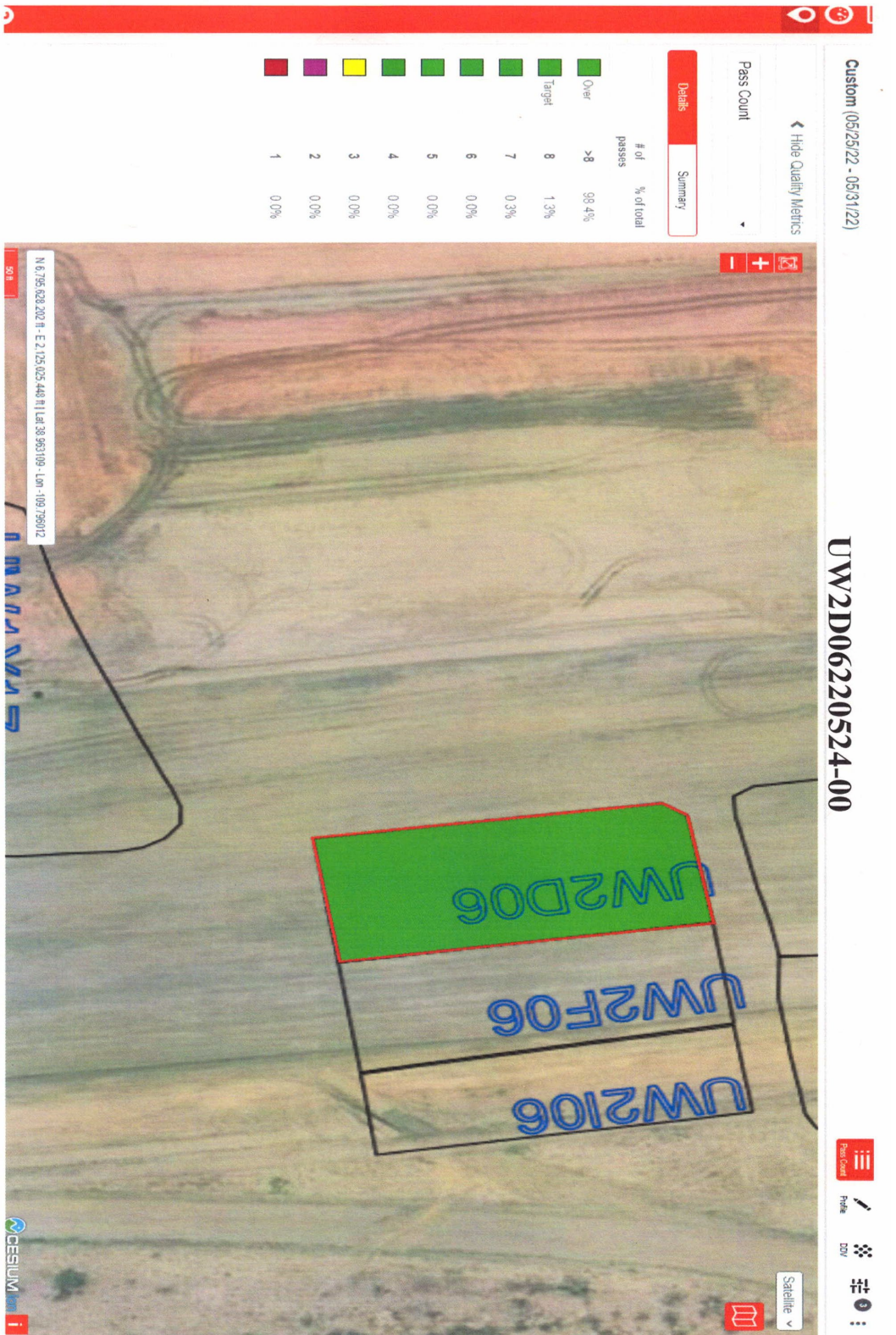
% =8	100.0%
Elevation Avg	4985.6
Total =8	3053
Total Lines	3053

Pass	Minimum Number of Machine Passes
	8

Lift ID: UW2D06220524-00

Northing	Easting	Elevation	# of Passes	Passes =8	Count	
6795413	2124914	4982.3	19	1	1	Lift Height
6795413	2124917	4982.2	27	1	1	1' 0"
6795413	2124921	4982.2	15	1	1	
6795417	2124914	4982.4	19	1	1	Thick Lift Threshold
6795417	2124917	4982.3	25	1	1	2' 0"
6795417	2124921	4982.3	15	1	1	
6795417	2124924	4982.4	24	1	1	Last Lift Elevation
6795417	2124927	4982.5	16	1	1	N/A
6795417	2124930	4982.4	15	1	1	
6795417	2124934	4982.4	13	1	1	
6795417	2124937	4982.4	14	1	1	
6795417	2124940	4982.3	9	1	1	
6795420	2124911	4982.5	22	1	1	
6795420	2124914	4982.3	20	1	1	
6795420	2124917	4982.4	22	1	1	
6795420	2124921	4982.3	15	1	1	
6795420	2124924	4982.4	23	1	1	
6795420	2124927	4982.4	18	1	1	
6795420	2124930	4982.3	15	1	1	
6795420	2124934	4982.3	15	1	1	
6795420	2124937	4982.4	10	1	1	
6795420	2124940	4982.3	12	1	1	
6795420	2124944	4982.3	21	1	1	
6795420	2124947	4982.4	13	1	1	
6795420	2124950	4982.3	19	1	1	
6795420	2124954	4982.5	11	1	1	
6795423	2124911	4982.8	21	1	1	
6795423	2124914	4982.6	22	1	1	
6795423	2124917	4982.5	19	1	1	
6795423	2124921	4982.4	17	1	1	
6795423	2124924	4982.5	22	1	1	
6795423	2124927	4982.5	13	1	1	
6795423	2124930	4982.4	13	1	1	
6795423	2124934	4982.4	15	1	1	
6795423	2124937	4982.5	12	1	1	
6795423	2124940	4982.3	19	1	1	
6795423	2124944	4982.4	22	1	1	
6795423	2124947	4982.4	13	1	1	
6795423	2124950	4982.6	18	1	1	
6795423	2124954	4982.5	8	1	1	
6795423	2124957	4982.4	10	1	1	
6795423	2124960	4982.5	8	1	1	
6795423	2124963	4982.4	11	1	1	
6795423	2124967	4982.4	11	1	1	

## Appendix A2. RRM Lift Approval Package (continued)



4 of 6

4/5

## Appendix A2. RRM Lift Approval Package (continued)

### FIELD DENSITY TEST

<b>PROJECT:</b> <u>Moab UMTRA</u>		<b>Standard Count:</b>		<b>Date:</b> <u>5/26/2022</u>	
<b>Lift ID:</b> <u>UW2D06220524-00</u>		MS= 491 490 487		<b>Gauge Calibration Date:</b> <u>12/2/2021</u>	
<b>Make/Model:</b> <u>Troxler 3430</u>		DS= 2130 2745 2790			
<b>Task RRM</b>		<b>Sand-Cone and Plate No.</b> <u>N/A</u>		<b>Sand-Cone Calibration Date:</b> <u>N/A</u>	

Test No.	Depth (inches)	Test Location	Test NUC	Type Sand	MDD (pcf)	OMC (%)	WD (pcf)	DD (pcf)	MC (%)	Compaction (%)	Pass Fail	Soil Type	Proctor ID.	Date of Test
P1	6	See Map on Pg. 1	X		110.0	16.1	114.9	101.5	13.2	92.3	P	CL	DB3-20200422	5/26/2022
	12	See Map on Pg. 1	X		110.0	16.1	117.3	104.0	12.8	94.5	P	CL	DB3-20200422	5/26/2022
	18	See Map on Pg. 1	X		110.0	16.1	112.6	100.3	12.3	91.2	P	CL	DB3-20200422	5/26/2022
										#DIV/0!	P			
										#DIV/0!	P			
										#DIV/0!	P			

**Legend:** \* indicates moisture and density correction for RRM only      \*\* indicates a retest

<p><b>Moisture Content: P1@-6"</b></p> <p>A. Container No. <b>DOG</b></p> <p>B. Container Mass (g): <b>216</b></p> <p>C. Mass of Container &amp; Wet Soil (g) <b>559.6</b></p> <p>D. Mass of Container &amp; Dry Soil (g) <b>519.6</b></p> <p>E. Moisture Content (%) <b>13.18</b></p>	<p><b>Moisture Content: P1@-12"</b></p> <p>A. Container No. <b>A-9</b></p> <p>B. Container Mass: <b>214.3</b></p> <p>C. Mass of Container &amp; Wet Soil <b>531.8</b></p> <p>D. Mass of Container &amp; Dry Soil <b>495.7</b></p> <p>E. Moisture Content <b>12.83</b></p>
--	---

ASTM D698

Testing By: <u>Tammy Hooker</u> Date: <u>5/26/2022</u> Print / Signature	QA/QC Rep: <u>R. Anderson</u> Print / Signature
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## Appendix A2. RRM Lift Approval Package (continued)

Project: Moab UMTRA

Report Date: 5/26/2022

Lift ID: UW2D06220524-00

Sample ID: *P1-18		Resulting % M.C.
Item #		
1)	Container ID: AA	<b>12.31</b>
2)	Mass of container: 214.9	
3)	Mass of container & wet soil: 527	
4)	Mass of container & dry soil: 492.8	

Sample ID:		Resulting % M.C.
Item #		
1)	Container ID: N	<b>#DIV/0!</b>
2)	Mass of container: A	
3)	Mass of container & wet soil:	
4)	Mass of container & dry soil:	

Sample ID:		Resulting % M.C.
Item #		
1)	Container ID: N	<b>#DIV/0!</b>
2)	Mass of container: A	
3)	Mass of container & wet soil:	
4)	Mass of container & dry soil:	

Sample ID:		Resulting % M.C.
Item #		
1)	Container ID: N	<b>#DIV/0!</b>
2)	Mass of container: A	
3)	Mass of container & wet soil:	
4)	Mass of container & dry soil:	

Sample ID:		Resulting % M.C.
Item #		
1)	Container ID: N	<b>#DIV/0!</b>
2)	Mass of container: A	
3)	Mass of container & wet soil:	
4)	Mass of container & dry soil:	

Sample ID:		Resulting % M.C.
Item #		
1)	Container ID: N	<b>#DIV/0!</b>
2)	Mass of container: A	
3)	Mass of container & wet soil:	
4)	Mass of container & dry soil:	

$$\% \text{ M.C.} = \frac{\text{Item (3)} - \text{Item (4)}}{\text{Item (4)} - \text{Item (2)}} \times 100$$

# Appendix A2. Top of Waste Buyoff Survey



## Top of waste Buyoff Form

Client: Department of Energy  
 Project: Moab UMTRA  
 Project Date: 02/09/2022

In signing this document, the signatory agrees that the top of waste is complete and meets both the project specifications and RAIP requirements.

Excavation Area	Lift Area
	UW1Q14211028-00 and UW1V06211103-00

Approver Name/Title	Signature	Sign Date
Mike McCullough/ CJ Operations/Site Mgr.		02-09-2022
Robert Anderson/ QA/QC Representative		2/09/2022
Kathy Turvy/ QA/AC Manager		2/09/2022
<b>Comments</b>		
In addition to the compaction verification of the final grade conducted during the lift approval process, QC performed a visual inspection and grade verification survey on 50 FT grid spacing of the final surface. Both indicated satisfactory results. The grade was surveyed to ensure the final top of waste surface met grades at the specified tolerance of 0 to +0.17 FT of design.		

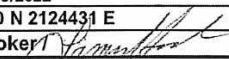
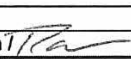




## Appendix A2. Top of Waste Buyoff Survey (continued)

<b>Top of Waste Buyoff Survey</b>						
Area Buyoff ID:			UW1V06211203-00		Date: 11/3/2021	
Point #	Northing	Easting	Surveyed Elevation	Design Elevation	Difference in feet	Difference in inches
11709_stk	6795310	2124500	4988.9	4988.8	0.1	1.2
11745_stk	6795310	2124550	4988.5	4988.5	0.0	0.0
11782_stk	6795360	2124600	4989.5	4989.5	0.0	0.0
11819_stk	6795360	2124650	4989.2	4989.2	0.0	0.0
11856_stk	6795360	2124700	4989.0	4988.9	0.1	1.2
11857_stk	6795410	2124700	4990.2	4990.2	0.0	0.0
11894_stk	6795410	2124750	4989.9	4989.9	0.0	0.0
11931_stk	6795410	2124800	4989.6	4989.6	0.0	0.0
11968_stk	6795410	2124850	4989.3	4989.3	0.0	0.0
11932_stk	6795460	2124800	4990.8	4990.8	0.0	0.0
11895_stk	6795460	2124750	4991.1	4991.1	0.0	0.0
11858_stk	6795460	2124700	4991.4	4991.4	0.0	0.0
11821_stk	6795460	2124650	4991.7	4991.7	0.0	0.0
11784_stk	6795460	2124600	4992.0	4992.0	0.0	0.0
11783_stk	6795410	2124600	4990.8	4990.7	0.1	1.2
11747_stk	6795410	2124550	4991.0	4991.0	0.0	0.0
11746_stk	6795360	2124550	4989.8	4989.8	0.0	0.0
11710_stk	6795360	2124500	4990.1	4990.1	0.0	0.0
11674_stk	6795360	2124450	4990.4	4990.3	0.1	1.2
11675_stk	6795410	2124450	4991.6	4991.6	0.0	0.0
11676_stk	6795460	2124450	4992.8	4992.8	0.0	0.0
11712_stk	6795460	2124500	4992.6	4992.5	0.1	1.2
11711_stk	6795410	2124500	4991.3	4991.3	0.0	0.0
11748_stk	6795460	2124550	4992.3	4992.2	0.1	1.2
11820_stk	6795410	2124650	4990.5	4990.4	0.1	1.2
11933_stk	6795510	2124800	4992.1	4992.1	0.0	0.0
11934_stk	6795560	2124800	4993.3	4993.3	0.0	0.0
11935_stk	6795610	2124800	4994.5	4994.5	0.0	0.0
11936_stk	6795660	2124800	4995.8	4995.7	0.1	1.2
11937_stk	6795710	2124800	4996.9	4996.8	0.1	1.2
11938_stk	6795760	2124800	4995.8	4995.8	0.0	0.0
11900_stk	6795710	2124750	4996.9	4996.9	0.0	0.0
11899_stk	6795660	2124750	4996.0	4996.0	0.0	0.0
11898_stk	6795610	2124750	4994.8	4994.8	0.0	0.0
11897_stk	6795560	2124750	4993.6	4993.6	0.0	0.0
11896_stk	6795510	2124750	4992.4	4992.3	0.1	1.2
11859_stk	6795510	2124700	4992.6	4992.6	0.0	0.0
11860_stk	6795560	2124700	4993.9	4993.8	0.1	1.2
11861_stk	6795610	2124700	4995.0	4995.0	0.0	0.0
11862_stk	6795660	2124700	4996.3	4996.3	0.0	0.0
11863_stk	6795710	2124700	4996.9	4996.9	0.0	0.0
11864_stk	6795710	2124700	4996.9	4996.9	0.0	0.0
11826_stk	6795710	2124650	4996.9	4996.9	0.0	0.0
11825_stk	6795660	2124650	4996.6	4996.6	0.0	0.0
11824_stk	6795610	2124650	4995.4	4995.3	0.1	1.2
11823_stk	6795560	2124650	4994.2	4994.1	0.1	1.2
11822_stk	6795510	2124650	4992.9	4992.9	0.0	0.0
11785_stk	6795510	2124600	4993.2	4993.2	0.0	0.0
11786_stk	6795560	2124600	4994.4	4994.4	0.0	0.0
11787_stk	6795560	2124600	4994.4	4994.4	0.0	0.0
11788_stk	6795610	2124600	4995.6	4995.6	0.0	0.0
11789_stk	6795660	2124600	4996.9	4996.9	0.0	0.0
11790_stk	6795710	2124600	4997.0	4997.0	0.0	0.0
11753_stk	6795710	2124550	4997.0	4997.0	0.0	0.0
11717_stk	6795710	2124500	4997.0	4997.0	0.0	0.0
11677_stk	6795510	2124450	4994.1	4994.0	0.1	1.2
11678_stk	6795560	2124450	4995.3	4995.3	0.0	0.0
11679_stk	6795610	2124450	4996.5	4996.5	0.0	0.0
11680_stk	6795660	2124450	4997.7	4997.7	0.0	0.0
11681_stk	6795710	2124450	4997.1	4997.1	0.0	0.0
11716_stk	6795660	2124500	4997.4	4997.4	0.0	0.0
11752_stk	6795660	2124550	4997.1	4997.1	0.0	0.0
11751_stk	6795610	2124550	4995.9	4995.9	0.0	0.0

## Appendix A2. Top of Waste Buyoff Survey (continued)

11750_stk	6795560	2124550	4994.7	4994.7	0.0	0.0
11749_stk	6795510	2124550	4993.5	4993.5	0.0	0.0
11713_stk	6795510	2124500	4993.8	4993.7	0.1	1.2
11714_stk	6795560	2124500	4995.0	4995.0	0.0	0.0
11715_stk	6795610	2124500	4996.2	4996.2	0.0	0.0
Comments:	QC performed a visual inspection of the final surface with satisfactory results. All observations of grade tolerance indicated the grade was within the specification requirement of Design grade +0.17 FT (no minus tolerance allowed).					
Approval Date: 02/09/2022			Total Square Feet: 132,535			
North West Corner: 6795730 N 2124431 E						
QC Signature: Tammy Hooker 			Reviewed By: Robert Anderson 			

## Appendix A2. Top of Waste Buyoff Survey (continued)



## Appendix A2. Top of Waste Buyoff Survey (continued)



### Top of waste Buyoff Form

**Client:** Department of Energy  
**Project:** Moab UMTRA Project  
**Date:** 08-30-2022

In signing this document, the signatory agrees that the top of waste is complete and meets both the project specifications and RAIP requirements.

Excavation Area	Lift Areas
	UW2E5N, UW2D1N, UW2G1N, UW2C06, UW2E05, UW2H05 and UW1V15

Approver Name/Title	Signature	Sign Date
Mike McCullough/ CJ Operations/Site Mgr.		08.30.22
Robert Anderson/ QA/QC Representative		8/30/2022
Kathy Turvy/ QA/AC Manager		8/30/2022
Tammy Hooker/ QA/QC Representative		8/30/2022
<b>Comments</b>		

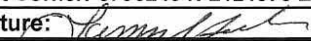

## Appendix A2. Top of Waste Buyoff Survey (continued)

<b>Top of Waste Buyoff Survey</b>						
Area Buyoff ID:			UW2D5N220816-00		Date: 8/16/2022	
Point #	Northing	Easting	Surveyed Elevation	Design Elevation	Difference in feet	Difference in inches
11669_stk	6795110.032	2124449.988	4984.303	4984.219	0.1	1.0
11670_stk	6795159.981	2124449.982	4985.454	4985.444	0.0	0.1
11705_stk	6795110.021	2124500.016	4983.949	4983.937	0.0	0.1
11706_stk	6795160.047	2124500.022	4985.233	4985.162	0.1	0.9
11742_stk	6795159.975	2124549.956	4984.886	4984.880	0.0	0.1
11778_stk	6795160.016	2124600.053	4984.623	4984.598	0.0	0.3
11815_stk	6795160.045	2124649.962	4984.348	4984.316	0.0	0.4
11852_stk	6795160.056	2124700.032	4984.062	4984.033	0.0	0.3
11889_stk	6795160.001	2124749.965	4983.761	4983.751	0.0	0.1
11926_stk	6795159.962	2124800.042	4983.492	4983.469	0.0	0.3
11927_stk	6795209.987	2124799.953	4984.710	4984.694	0.0	0.2
11890_stk	6795209.986	2124750.019	4985.005	4984.976	0.0	0.3
11853_stk	6795209.989	2124700.023	4985.322	4985.258	0.1	0.8
11816_stk	6795209.959	2124649.992	4985.556	4985.541	0.0	0.2
11779_stk	6795210.008	2124600.030	4985.843	4985.823	0.0	0.2
11743_stk	6795210.015	2124549.976	4986.111	4986.105	0.0	0.1
11707_stk	6795209.966	2124499.985	4986.402	4986.387	0.0	0.2
11671_stk	6795209.984	2124449.969	4986.673	4986.669	0.0	0.0
11672_stk	6795260.008	2124449.984	4987.919	4987.894	0.0	0.3
11708_stk	6795260.051	2124499.981	4987.628	4987.612	0.0	0.2
11744_stk	6795260.011	2124550.016	4987.351	4987.330	0.0	0.3
11780_stk	6795259.970	2124600.037	4987.054	4987.048	0.0	0.1
11817_stk	6795260.014	2124649.963	4986.793	4986.765	0.0	0.3
11854_stk	6795260.041	2124699.982	4986.532	4986.483	0.0	0.6
11891_stk	6795260.033	2124750.047	4986.215	4986.201	0.0	0.2
11928_stk	6795260.042	2124800.015	4985.933	4985.919	0.0	0.2
11929_stk	6795310.032	2124799.970	4987.166	4987.144	0.0	0.3
11930_stk	6795359.990	2124799.968	4988.407	4988.369	0.0	0.5
11893_stk	6795360.000	2124749.965	4988.740	4988.651	0.1	1.1
11856_stk	6795360.042	2124700.028	4988.977	4988.933	0.0	0.5
11818_stk	6795309.974	2124650.007	4988.042	4987.990	0.1	0.6
11781_stk	6795310.017	2124600.037	4988.303	4988.273	0.0	0.4
11745_stk	6795310.016	2124550.000	4988.578	4988.555	0.0	0.3
11709_stk	6795310.064	2124499.995	4988.931	4988.837	0.1	1.1
11855_stk	6795310.009	2124700.020	4987.793	4987.708	0.1	1.0
11892_stk	6795309.947	2124749.975	4987.518	4987.426	0.1	1.1
11979_stk	6795960.050	2124850.000	4991.797	4991.752	0.0	0.5
12015_stk	6795960.005	2124900.043	4991.780	4991.721	0.1	0.7
12051_stk	6795960.026	2124950.019	4991.752	4991.690	0.1	0.7
12087_stk	6795960.006	2124999.992	4991.695	4991.659	0.0	0.4
12123_stk	6795960.009	2125050.008	4991.688	4991.628	0.1	0.7
12160_stk	6795959.991	2125099.967	4991.630	4991.597	0.0	0.4
12197_stk	6795960.016	2125150.016	4991.619	4991.567	0.1	0.6
12198_stk	6796009.993	2125149.972	4990.655	4990.556	0.1	1.2
12161_stk	6796010.041	2125099.990	4990.635	4990.587	0.0	0.6
12124_stk	6796009.985	2125050.002	4990.625	4990.618	0.0	0.1
12088_stk	6796010.039	2124999.992	4990.667	4990.648	0.0	0.2
12052_stk	6796009.985	2124950.047	4990.720	4990.678	0.0	0.5
12016_stk	6796010.036	2124899.984	4990.737	4990.709	0.0	0.3
11980_stk	6796009.987	2124850.032	4990.761	4990.739	0.0	0.3
11981_stk	6796059.987	2124849.995	4989.761	4989.727	0.0	0.4
12017_stk	6796059.995	2124899.968	4989.735	4989.697	0.0	0.5
12053_stk	6796060.046	2124949.984	4989.693	4989.667	0.0	0.3
12089_stk	6796059.959	2125000.015	4989.665	4989.636	0.0	0.3
12125_stk	6796059.980	2125049.974	4989.637	4989.606	0.0	0.4
12162_stk	6796060.003	2125099.948	4989.633	4989.576	0.1	0.7
12199_stk	6796060.018	2125149.970	4989.560	4989.545	0.0	0.2
12200_stk	6796109.981	2125150.031	4988.582	4988.533	0.0	0.6
12163_stk	6796110.008	2125099.956	4988.575	4988.564	0.0	0.1
12126_stk	6796109.997	2125050.042	4988.612	4988.594	0.0	0.2
12090_stk	6796109.967	2124999.991	4988.666	4988.624	0.0	0.5

## Appendix A2. Top of Waste Buyoff Survey (continued)

12054_stk	6796110.007	2124950.017	4988.664	4988.654	0.0	0.1
12018_stk	6796110.044	2124900.024	4988.697	4988.685	0.0	0.1
12019_stk	6796159.976	2124899.988	4987.708	4987.672	0.0	0.4
12055_stk	6796159.977	2124949.951	4987.647	4987.642	0.0	0.1
12091_stk	6796160.005	2124999.965	4987.626	4987.612	0.0	0.2
12127_stk	6796159.997	2125049.972	4987.590	4987.581	0.0	0.1
12164_stk	6796160.019	2125100.034	4987.578	4987.551	0.0	0.3
12201_stk	6796159.988	2125149.947	4987.529	4987.521	0.0	0.1
12202_stk	6796210.016	2125150.006	4986.541	4986.508	0.0	0.4
12203_stk	6796260.028	2125149.988	4985.514	4985.496	0.0	0.2
12240_stk	6796259.980	2125200.013	4985.494	4985.466	0.0	0.3
12166_stk	6796260.028	2125099.976	4985.538	4985.526	0.0	0.1
12165_stk	6796209.980	2125100.002	4986.566	4986.539	0.0	0.3
12128_stk	6796209.963	2125050.030	4986.599	4986.569	0.0	0.4
12092_stk	6796210.044	2125000.001	4986.602	4986.599	0.0	0.0
12129_stk	6796259.983	2125049.948	4985.651	4985.556	0.1	1.1
12056_stk	6796209.973	2124950.032	4986.686	4986.629	0.1	0.7
12020_stk	6796210.050	2124900.019	4986.676	4986.660	0.0	0.2
11937_stk	6795710.041	2124799.984	4996.835	4996.829	0.0	0.1
11974_stk	6795709.973	2124850.034	4996.727	4996.666	0.1	0.7
12010_stk	6795709.978	2124900.006	4996.416	4996.384	0.0	0.4
12046_stk	6795710.048	2124950.008	4996.169	4996.102	0.1	0.8
12082_stk	6795710.039	2124999.974	4995.844	4995.820	0.0	0.3
12118_stk	6795709.948	2125049.989	4995.605	4995.538	0.1	0.8
12155_stk	6795710.011	2125100.033	4995.339	4995.256	0.1	1.0
12192_stk	6795710.018	2125150.000	4994.992	4994.974	0.0	0.2
12193_stk	6795760.055	2125149.997	4995.614	4995.603	0.0	0.1
12156_stk	6795760.048	2125099.990	4995.666	4995.634	0.0	0.4
12119_stk	6795759.991	2125049.986	4995.674	4995.665	0.0	0.1
12120_stk	6795760.006	2125050.039	4995.712	4995.665	0.0	0.6
12083_stk	6795760.036	2125000.003	4995.733	4995.696	0.0	0.4
12047_stk	6795760.034	2124950.019	4995.788	4995.727	0.1	0.7
12011_stk	6795759.992	2124900.022	4995.850	4995.758	0.1	1.1
11975_stk	6795760.020	2124850.022	4995.844	4995.789	0.1	0.7
11938_stk	6795760.005	2124800.015	4995.913	4995.819	0.1	1.1
11939_stk	6795810.030	2124799.969	4994.893	4994.812	0.1	1.0
11940_stk	6795810.035	2124850.027	4994.788	4994.781	0.0	0.1
11941_stk	6795810.053	2124899.991	4994.818	4994.750	0.1	0.8
12048_stk	6795809.995	2124950.009	4994.784	4994.719	0.1	0.8
12084_stk	6795809.988	2124999.977	4994.696	4994.688	0.0	0.1
12121_stk	6795810.044	2125049.992	4994.664	4994.655	0.0	0.1
12157_stk	6795809.984	2125099.959	4994.700	4994.624	0.1	0.9
12194_stk	6795810.033	2125150.007	4994.649	4994.593	0.1	0.7
12195_stk	6795860.026	2125149.967	4993.632	4993.584	0.0	0.6
12158_stk	6795860.040	2125099.968	4993.619	4993.615	0.0	0.0
12122_stk	6795859.998	2125049.976	4993.676	4993.646	0.0	0.4
12085_stk	6795860.000	2125000.040	4993.756	4993.680	0.1	0.9
12049_stk	6795859.997	2124950.024	4993.806	4993.711	0.1	1.1
12013_stk	6795860.044	2124900.000	4993.836	4993.742	0.1	1.1
11977_stk	6795859.997	2124849.982	4993.780	4993.773	0.0	0.1
11978_stk	6795910.017	2124849.971	4992.833	4992.762	0.1	0.9
12014_stk	6795909.967	2124899.981	4992.773	4992.731	0.0	0.5
12050_stk	6795910.039	2124950.037	4992.704	4992.700	0.0	0.0
12086_stk	6795909.986	2125000.043	4992.702	4992.670	0.0	0.4
12130_stk	6795910.027	2125050.004	4992.690	4992.637	0.1	0.6
12159_stk	6795909.954	2125100.020	4992.614	4992.607	0.0	0.1
12196_stk	6795909.950	2125149.993	4992.602	4992.576	0.0	0.3
11936_stk	6795660.026	2124799.984	4995.769	4995.723	0.0	0.6
11973_stk	6795660.004	2124850.027	4995.561	4995.441	0.1	1.4
12009_stk	6795660.028	2124900.040	4995.215	4995.159	0.1	0.7
12045_stk	6795660.011	2124950.046	4994.899	4994.877	0.0	0.3
12081_stk	6795660.029	2125000.041	4994.601	4994.595	0.0	0.1
12117_stk	6795659.997	2125050.029	4994.379	4994.313	0.1	0.8
12154_stk	6795660.020	2125099.979	4994.118	4994.031	0.1	1.0
12191_stk	6795659.960	2125150.013	4993.850	4993.749	0.1	1.2
12190_stk	6795609.997	2125150.020	4992.622	4992.523	0.1	1.2
12153_stk	6795610.015	2125099.988	4992.819	4992.805	0.0	0.2
12116_stk	6795610.016	2125050.002	4993.132	4993.087	0.0	0.5



## Appendix A2. Top of Waste Buyoff Survey (continued)

12080_stk	6795610.031	2124999.977	4993.387	4993.369	0.0	0.2
12044_stk	6795609.966	2124949.972	4993.736	4993.651	0.1	1.0
12008_stk	6795609.991	2124900.007	4994.020	4993.933	0.1	1.0
11972_stk	6795609.993	2124849.969	4994.283	4994.215	0.1	0.8
11971_stk	6795559.998	2124849.998	4993.067	4992.989	0.1	0.9
12007_stk	6795559.984	2124899.961	4992.780	4992.707	0.1	0.9
12043_stk	6795559.980	2124950.017	4992.525	4992.425	0.1	1.2
12079_stk	6795560.013	2125000.004	4992.223	4992.143	0.1	1.0
12115_stk	6795559.984	2125050.011	4991.948	4991.861	0.1	1.0
12152_stk	6795559.996	2125100.039	4991.633	4991.579	0.1	0.6
12189_stk	6795559.968	2125150.041	4991.390	4991.297	0.1	1.1
12188_stk	6795509.960	2125149.995	4990.143	4990.070	0.1	0.9
12150_stk	6795459.949	2125099.993	4989.173	4989.126	0.0	0.6
12151_stk	6795509.991	2125099.972	4990.417	4990.353	0.1	0.8
12114_stk	6795510.005	2125049.955	4990.715	4990.635	0.1	1.0
12113_stk	6795460.022	2125050.010	4989.478	4989.409	0.1	0.8
12077_stk	6795459.985	2125000.034	4989.737	4989.691	0.0	0.6
12078_stk	6795510.044	2124999.976	4990.949	4990.917	0.0	0.4
12042_stk	6795509.978	2124949.990	4991.291	4991.199	0.1	1.1
12041_stk	6795460.015	2124950.048	4990.040	4989.973	0.1	0.8
12005_stk	6795459.962	2124900.001	4990.314	4990.255	0.1	0.7
12004_stk	6795410.014	2124899.982	4989.047	4989.029	0.0	0.2
11968_stk	6795409.989	2124849.964	4989.360	4989.311	0.0	0.6
11969_stk	6795459.968	2124849.964	4990.541	4990.537	0.0	0.0
11970_stk	6795510.001	2124850.046	4991.838	4991.763	0.1	0.9
12006_stk	6795510.014	2124899.960	4991.573	4991.481	0.1	1.1
Comments:	QC performed a visual inspection of the final surface with satisfactory results. All observations of grade tolerance indicated the grade was within the specification requirement of Design grade +0.17 FT (no minus tolerance allowed).					
Approval Date:	8/30/2022			Total Square Feet:	359,446	
North West Corner: 6796240 N 2124870 E						
QC Signature:				Reviewed By:		



## Appendix A2. Top of Waste Buyoff Survey (continued)



<p><b>SCALE</b></p> 	<p><b>NOTES:</b></p> <p>1.) This drawing shows the lift boundary of UW2D5N220816-00, and the "grade verification" points to confirm grading on a 50' x 50' grid.</p> <p>2.) UW2D5N220816-00 is a lift area that was combined with seven other lifts: UW2D1N, UW2E5N, UW2G1N, UW2C06, UW2E05, UW2H05 and UW2V15</p>		<p>Prepared By:</p> <p style="text-align: center;"><b>NORTHWIND</b> FORTAGE, INC.</p> <p style="text-align: center;">200 Grand Avenue 5th Floor Grand Junction, Colorado 81501</p>	<p><b>CJ Top of Waste Final Grade, Lift Boundary and Grade Verification Points for UW2D5N220816-00</b></p>
			<p>08/25/2022</p>	<p>Page 4 of 4</p>

**Appendix A3.  
Interim Cover**

**Standard Proctor Test Results Summary  
Lift Approval Summaries  
Lift Approval Package  
Buyoff Surveys**

## Appendix A3. Interim Cover Standard Proctor Test Results Summary

2022

Proctor ID	Date sampled	Date Approved	Max Dry Density	Optimum Moisture	Proctor Description
Interim Cover #2 2021	2/4/2021	2/16/2021	117.6	12.8	Clay, silty,, sandy (CL)
Interim Cover #5 2021	2/4/2021	2/16/2021	121.9 & 126.6	11.3 & 126.6*	Clay, silty,, sandy with shale pieces (CL)

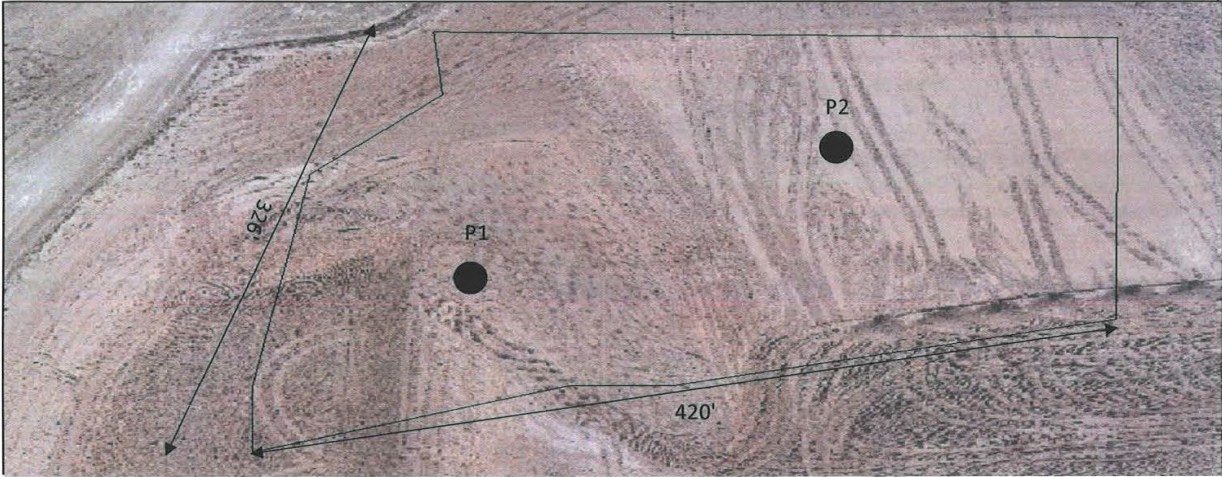
*\*Oversized (Rock) Correction*

## Appendix A3. Interim Cover Lift Approval Summaries

December 2021 Interim Cover										
Date	Lift ID #	# of Passing Moisture Tests	Quantity Approved (yd <sup>3</sup> )	Cumulative Quantity Approved (yd <sup>3</sup> )	CAES Screen Passing Pixels (%)	Average Thickness (ft)	Proctor ID #	# of Nuclear Density Gauge Verifications	# of Sandcone Verifications	Verified Compaction (%)
12/13/21	UI1Q14211115-00	2	3153	3153	N/A	1.0	Interim Cover #5	2	0	97.0
12/13/21	UIV06211202-00	3	5089	8242	N/A	1.0	Interim Cover #2 & 5	3	0	94.0
<p>Average CBCS Screen Passing Pixels (%) = 0.0</p> <p>Total Quantity Approved (yd<sup>3</sup>) = 8,242</p> <p>Total # of Nuclear Density Gauge Tests = 5</p> <p>Total # of Moisture Tests = 5</p> <p>Quantity per Moisture Test (yd<sup>3</sup>) = 1,648</p> <p>Total Average Thickness (ft) = 1.0</p>										

# Appendix A3. Interim Cover Lift Approval Package

## LIFT APPROVAL FORM

<b>PROJECT:</b>	Moab UMTRA	<b>OTHER</b>	
<b>NW CORNER</b>		<b>DATE:</b>	11/15/2021
			
IDENTIFY LOTS ABOVE			
<b>LIFT ID:</b>	UI1Q1421115-00	<b>NW CORNER:</b>	6795730 N 2124431 E
Uncompacted Thickness:	1.0	Compacted Thickness:	N/A
NW CORNER of debris placement:	N/A	EW Dimension	N/A
Lift Area (ft <sup>2</sup> ):	85,033	NS Dimension	N/A
		Lift Volume (yd <sup>3</sup> ):	3,153
<p><b>Comments:</b> Comments: QC confirmed that the lift area was scarified prior to placement. QC observed the material placed to not contain any partical sizes larger than 2" as per specification. QC also did <del>four</del> Troxler tests to verify compaction and moisture in four different locations. QC also determined the lift was placed to the design authorities specification (placed to design up to 2" above, no minus tolerance). Note: UI1Q1421115-00 is a lift area that was UW1Q14.</p>			
<p>Attached Forms: Grid Slope <input checked="" type="checkbox"/> Compaction Macro <input type="checkbox"/> Print Screen <input type="checkbox"/> Moisture/ Density <input checked="" type="checkbox"/></p>			
KEYING IN NOTES: N E S W		MOISTURE/ DENSITY TESTS ID # (S):	
N/A		P1 & P2	
LIFT APPROVED BY: <u>Tammy Hooker</u>		DATE:	12/13/2021
Robert Anderson		TIME:	1417
QA/QC APPROVAL		DATE:	12/13/2021

Density Testing  
DOE-EM/GJRAC1783  
Rev. 1

QC-F-001  
File index No. 43.8.2  
Page 1 of 3



## Appendix A3. Interim Cover Lift Approval Package (continued)

### FIELD DENSITY TEST

<b>PROJECT:</b> <u>Moab UMTRA</u>		<b>Standard Count:</b>		<b>Date:</b> <u>11/16/2021</u>	
<b>Lift ID:</b> <u>UI1Q14211115-00</u>		MS= 498			
<b>Make/Model:</b> <u>Troxler 3430</u>		DS= 2193		<b>Gauge Calibration Date:</b> <u>12/15/2020</u>	
<b>Task</b> <u>RRM</u>		<b>Sand-Cone and Plate No.</b> <u>N/A</u>		<b>Sand-Cone Calibration Date:</b> <u>N/A</u>	

Test No.	Depth (inches)	Test Location	Test NUC	Type Sand	MDD (pcf)	OMC (%)	WD (pcf)	DD (pcf)	MC (%)	Compaction (%)	Pass Fail	Soil Type	Proctor ID.	Date of Test
P1	6	See Map on Pg. 1	X		121.9	11.8	126.3	119.2	6.0	97.8	P	CL	Interim Cover #5	11/16/2021
P2	6	See Map on Pg. 1	X		121.9	11.8	124.2	117.1	6.1	96.1	P	CL	Interim Cover #5	11/18/2021

Legend: \* indicates moisture and density correction for RRM only      \*\* indicates a retest

**Moisture Content:**

A. Container No.

B. Container Mass (g):

C. Mass of Container & Wet Soil (g)

D. Mass of Container & Dry Soil (g)

E. Moisture Content (%)

**Moisture Content:**

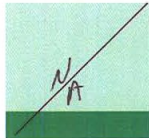

A. Container No.

B. Container Mass:


C. Mass of Container & Wet Soil

D. Mass of Container & Dry Soil

E. Moisture Content





ASTM D698

Testing By: Tyler Bornsen 

Print / Signature

Date: 12/13/2021

QA/QC Rep: Robert Anderson 

Print / Signature

Date: 12/13/2021

## Appendix A3. Interim Cover Buyoff Surveys



### Top of waste Buyoff Form

**Client:** Department of Energy  
**Project:** Moab UMTRA Project  
**Date:** 12-13-2021

In signing this document, the signatory agrees that the top of waste is complete and meets both the project specifications and RAIP requirements.

Excavation Area	Lift Area
	UI1Q14211115-00 and UI1V06211202-00

Approver Name/Title	Signature	Sign Date
Mike McCullough/ CJ Operations/Site Mgr.		12-13-21
Robert Anderson/ QA/QC Representative		12/13/2021
Kathy Turvy/ QA/AC Manager		12/14/2021
Tammy Hooker / QA/QC Representative		12/13/2021
<b>Comments</b>		

KWFML38X21  
043.008.03.E





## Appendix A3. Interim Cover Buyoff Surveys (continued)

<b>Interim Cover Buyoff Survey</b>						
Area Buyoff ID:			UW1V06211202-00		Date: 12/2/2021	
Point #	Northing	Easting	Surveyed Elevation	Design Elevation	Difference in feet	Difference in inches
21674_stk	6795360.00	2124450.00	4991.3	4991.3	0.0	0.0
21675_stk	6795410.00	2124450.00	4992.6	4992.6	0.0	0.0
21676_stk	6795460.00	2124450.00	4993.9	4993.8	0.1	1.2
21677_stk	6795510.00	2124450.00	4995.1	4995.0	0.1	1.2
21678_stk	6795560.00	2124450.00	4996.3	4996.3	0.0	0.0
21679_stk	6795610.00	2124450.00	4997.5	4997.5	0.0	0.0
21680_stk	6795660.00	2124450.00	4998.7	4998.7	0.0	0.0
21681_stk	6795710.00	2124450.00	4998.1	4998.1	0.0	0.0
21682_stk	6795710.00	2124500.00	4998.0	4998.0	0.0	0.0
21683_stk	6795660.00	2124500.00	4998.5	4998.4	0.1	1.2
21684_stk	6795610.00	2124500.00	4997.3	4997.2	0.1	1.2
21685_stk	6795560.00	2124500.00	4996.0	4996.0	0.0	0.0
21686_stk	6795510.00	2124500.00	4994.8	4994.7	0.1	1.2
21687_stk	6795460.00	2124500.00	4993.6	4993.5	0.1	1.2
21688_stk	6795410.00	2124500.00	4992.4	4992.3	0.1	1.2
21689_stk	6795360.00	2124500.00	4991.1	4991.1	0.0	0.0
21690_stk	6795360.00	2124550.00	4990.8	4990.8	0.0	0.0
21691_stk	6795410.00	2124550.00	4992.1	4992.0	0.1	1.2
21692_stk	6795460.00	2124550.00	4993.3	4993.2	0.1	1.2
21693_stk	6795510.00	2124550.00	4994.5	4994.5	0.0	0.0
21694_stk	6795560.00	2124550.00	4995.7	4995.7	0.0	0.0
21695_stk	6795610.00	2124550.00	4996.9	4996.9	0.0	0.0
21696_stk	6795660.00	2124550.00	4998.2	4998.1	0.1	1.2
21697_stk	6795710.00	2124550.00	4998.1	4998.0	0.1	1.2
21698_stk	6795710.00	2124600.00	4998.0	4998.0	0.0	0.0
21699_stk	6795660.00	2124600.00	4997.9	4997.9	0.0	0.0
21700_stk	6795610.00	2124600.00	4996.7	4996.6	0.1	1.2
21701_stk	6795560.00	2124600.00	4995.4	4995.4	0.0	0.0
21702_stk	6795510.00	2124600.00	4994.3	4994.2	0.1	1.2
21703_stk	6795460.00	2124600.00	4993.0	4993.0	0.0	0.0
21704_stk	6795410.00	2124600.00	4991.8	4991.7	0.1	1.2
21705_stk	6795360.00	2124600.00	4990.6	4990.5	0.1	1.2
21706_stk	6795310.00	2124450.00	4990.1	4990.1	0.0	0.0
21707_stk	6795410.00	2124650.00	4991.5	4991.4	0.1	1.2
21708_stk	6795460.00	2124650.00	4992.7	4992.7	0.0	0.0
21709_stk	6795510.00	2124650.00	4993.9	4993.9	0.0	0.0
21710_stk	6795560.00	2124650.00	4995.2	4995.1	0.1	1.2
21711_stk	6795610.00	2124650.00	4996.4	4996.3	0.1	1.2
21712_stk	6795660.00	2124650.00	4997.6	4997.6	0.0	0.0
21713_stk	6795710.00	2124650.00	4998.0	4997.9	0.1	1.2
21714_stk	6795710.00	2124650.00	4998.0	4997.9	0.1	1.2
21715_stk	6795710.00	2124700.00	4998.0	4997.9	0.1	1.2
21716_stk	6795660.00	2124700.00	4997.4	4997.3	0.1	1.2
21717_stk	6795610.00	2124700.00	4996.1	4996.1	0.0	0.0
21718_stk	6795560.00	2124700.00	4994.9	4994.8	0.1	1.2
21719_stk	6795510.00	2124700.00	4993.7	4993.6	0.1	1.2
21720_stk	6795460.00	2124700.00	4992.5	4992.4	0.1	1.2
21721_stk	6795460.00	2124700.00	4992.5	4992.4	0.1	1.2
21722_stk	6795410.00	2124700.00	4991.2	4991.2	0.0	0.0
21723_stk	6795410.00	2124750.00	4990.9	4990.9	0.0	0.0
21724_stk	6795410.00	2124800.00	4990.7	4990.6	0.1	1.2
21725_stk	6795460.00	2124800.00	4991.9	4991.8	0.1	1.2
21726_stk	6795460.00	2124750.00	4992.2	4992.1	0.1	1.2
21727_stk	6795510.00	2124750.00	4993.4	4993.3	0.1	1.2
21728_stk	6795510.00	2124800.00	4993.1	4993.1	0.0	0.0
21729_stk	6795560.00	2124800.00	4994.3	4994.3	0.0	0.0
21730_stk	6795560.00	2124750.00	4994.6	4994.6	0.0	0.0
21731_stk	6795610.00	2124750.00	4995.8	4995.8	0.0	0.0
21732_stk	6795660.00	2124750.00	4997.1	4997.0	0.1	1.2
21733_stk	6795710.00	2124750.00	4997.9	4997.9	0.0	0.0
					0.0	0.0
					0.0	0.0
					0.0	0.0



## Appendix A3. Interim Cover Buyoff Surveys (continued)

