



ALS Canada Ltd.
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www.alsglobal.com/geochemistry

To: COLIN DUNN CONSULTING INC.
8756 PENDER PARK DRIVE
NORTH SAANICH BC V8L 3Z5

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Plus Appendix Pages
Finalized Date: 31-MAY-2019
Account: CODUCO

CERTIFICATE VA19111424

Project: Research-Collaborative w/ALS

This report is for 155 Vegetation samples submitted to our lab in Vancouver, BC, Canada on 9-MAY-2019.

The following have access to data associated with this certificate:

COLIN DUNN

DAVE HEBERLEIN

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-23	Pulp Login - Rcvd with Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-HAL01a	Super Trace Halogens on Vegetation

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS VA19111424

Sample Description	Method Analyte Units LOD	WEI-21	ME-HAL01a	ME-HAL01a	ME-HAL01a	ME-HAL01a
		Recvd Wt. kg 0.02	I ppm 0.002	Br ppm 0.02	F ppm 0.05	Cl ppm 0.1
1315		<0.02	0.016	10.85	96.8	303
1316		<0.02	0.010	0.31	120.0	38.0
1317		<0.02	0.004	0.61	34.0	599
1318		<0.02	0.002	0.09	80.7	3.2
1319		<0.02	0.014	0.83	69.7	500
1320		<0.02	0.005	0.61	38.2	301
1321		<0.02	0.035	1.15	50.6	499
1322		<0.02	0.025	1.17	47.5	500
1323		<0.02	0.027	0.49	47.0	5.5
1324		<0.02	0.026	7.88	41.9	896
1325		<0.02	0.029	0.42	31.3	201
1326		<0.02	0.017	0.40	26.4	67.2
1327		<0.02	0.041	2.02	30.0	1790
1328		<0.02	0.010	0.14	64.2	15.6
1329		<0.02	0.018	0.92	54.8	46.4
1330		<0.02	0.023	2.52	31.2	1790
1331		<0.02	0.008	0.15	74.5	18.1
1332		<0.02	0.011	0.20	60.3	33.8
1333		<0.02	0.042	1.28	50.7	2530
1334		<0.02	0.036	1.82	58.9	1115
1335		<0.02	0.020	1.03	29.8	604
1336		<0.02	0.104	92.6	2.16	401
1337		<0.02	0.034	1.79	33.0	201
1338		<0.02	0.025	1.44	24.6	605
1339		<0.02	0.038	7.26	35.5	503
1340		<0.02	0.034	2.16	43.0	1500
1341		<0.02	0.030	0.89	20.6	1005
1342		<0.02	0.044	0.57	35.0	402
1343		<0.02	0.011	0.16	74.5	28.3
1344		<0.02	0.029	0.87	39.4	1205
1345		<0.02	0.027	0.48	26.9	600
1346		<0.02	0.012	0.13	31.7	26.5
1347		<0.02	0.026	0.62	35.4	144.0
1348		<0.02	0.121	93.8	2.80	401
1349		<0.02	0.011	0.15	61.9	31.0
1350		<0.02	0.034	0.22	40.3	41.9
1351		<0.02	0.014	0.15	29.6	28.4
1352		<0.02	0.020	0.11	37.0	9.2
1353		<0.02	0.037	0.44	22.2	200
1354		<0.02	0.011	1.22	57.7	30.0



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		Recvd Wt. kg 0.02	I ppm 0.002	Br ppm 0.02	F ppm 0.05	Cl ppm 0.1
1355		<0.02	0.012	0.39	44.9	398
1356		<0.02	0.021	0.29	34.0	200
1357		<0.02	0.015	0.23	75.0	16.2
1358		<0.02	0.011	0.52	179.0	17.7
1359		<0.02	0.030	1.55	46.6	1675
1360		<0.02	0.015	0.65	36.3	302
1361		<0.02	0.040	1.98	32.4	1600
1362		<0.02	0.012	0.34	37.8	156.5
1363		<0.02	0.014	0.12	62.1	29.5
1364		<0.02	0.023	0.27	33.9	9.6
1365		<0.02	0.009	0.14	30.7	55.3
1366		<0.02	0.034	2.02	36.4	1960
1367		<0.02	0.040	2.09	44.3	1995
1368		<0.02	0.020	13.20	19.80	705
1369		<0.02	0.010	1.21	19.00	1500
1370		<0.02	0.111	96.0	3.19	402
1371		<0.02	0.018	5.64	37.6	298
1372		<0.02	0.009	0.16	98.1	2.0
1373		<0.02	0.022	1.04	72.0	298
1374		<0.02	0.006	0.16	114.0	25.6
1375		<0.02	0.043	1.02	82.2	694
1376		<0.02	0.025	0.91	37.6	500
1377		<0.02	0.014	0.30	50.7	200
1378		<0.02	0.013	0.31	50.4	147.0
1379		<0.02	0.017	1.17	24.6	704
1380		<0.02	0.013	8.91	24.3	800
1381		<0.02	0.054	1.63	99.9	1295
1382		<0.02	0.032	1.35	20.6	2510
1383		<0.02	0.011	0.31	45.6	99.9
1384		<0.02	0.016	1.62	25.0	1305
1385		<0.02	0.007	0.12	42.8	16.1
1386		<0.02	0.030	1.73	28.8	1500
1387		<0.02	0.043	1.53	67.5	1780
1388		<0.02	0.031	2.58	84.4	1305
1389		<0.02	0.018	15.25	31.5	600
1390		<0.02	0.019	1.09	25.6	502
1391		<0.02	0.011	0.86	26.9	399
1392		<0.02	0.021	0.78	36.6	59.7
1393		<0.02	0.013	0.14	66.7	10.9
1394		<0.02	0.102	87.1	4.31	401



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		Recvd Wt. kg 0.02	I ppm 0.002	Br ppm 0.02	F ppm 0.05	Cl ppm 0.1
1395		<0.02	0.007	0.21	35.6	20.2
1396		<0.02	0.004	0.17	75.3	142.5
1397		<0.02	0.021	0.94	18.45	606
1398		<0.02	0.010	0.49	28.2	300
1399		<0.02	0.094	6.66	87.9	158.5
1400		<0.02	0.018	0.43	40.0	201
1401		<0.02	0.021	0.34	45.4	99.8
1402		<0.02	0.021	0.86	55.1	17.4
1403		<0.02	0.051	1.08	38.2	401
1404		<0.02	0.025	0.23	38.6	100.0
1405		<0.02	0.021	0.14	53.8	23.5
1406		<0.02	0.015	0.31	94.5	18.6
1407		<0.02	0.037	1.65	163.0	1200
1408		<0.02	0.108	94.9	3.52	402
1409		<0.02	0.006	0.96	46.7	4.0
1410		<0.02	0.049	0.55	53.3	49.0
1411		<0.02	0.066	0.44	38.5	200
1412		<0.02	0.011	0.58	60.9	6.0
1413		<0.02	0.004	0.40	78.7	12.7
1414		<0.02	0.014	0.19	101.0	23.8
1415		<0.02	0.115	7.37	91.2	1585
1416		<0.02	0.024	1.48	25.0	1720
1417		<0.02	0.005	0.12	72.0	6.2
1418		<0.02	0.011	0.48	45.6	199.5
1419		<0.02	0.013	0.58	37.2	299
1420		<0.02	0.010	0.70	21.3	913
1421		<0.02	0.021	0.73	56.0	497
1422		<0.02	0.026	8.68	34.5	705
1423		<0.02	0.020	0.74	23.4	504
1424		<0.02	0.011	0.21	32.8	100.0
1425		<0.02	0.012	0.91	24.8	1510
1426		<0.02	0.005	0.30	86.4	11.4
1427		<0.02	0.006	0.25	61.3	113.0
1428		<0.02	0.009	0.10	110.5	3.8
1429		<0.02	0.009	1.33	77.8	30.0
1430		<0.02	0.017	1.09	43.1	904
1431		<0.02	0.105	94.2	1.01	401
1432		<0.02	0.028	1.80	32.1	987
1433		<0.02	0.033	1.00	15.25	1295
1434		<0.02	0.025	0.67	21.8	506



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		Recvd Wt. kg 0.02	I ppm 0.002	Br ppm 0.02	F ppm 0.05	Cl ppm 0.1
1435		<0.02	0.023	2.97	47.5	100.0
1436		<0.02	0.031	0.58	26.8	201
1437		<0.02	0.056	0.92	52.6	600
1438		<0.02	0.022	0.75	35.6	399
1439		<0.02	0.014	0.17	46.2	23.0
1440		<0.02	0.022	0.25	43.8	70.2
1441		<0.02	0.069	1.22	110.0	601
1442		<0.02	0.065	1.02	112.0	598
1443		<0.02	0.063	1.13	113.0	600
1444		<0.02	0.032	0.72	36.1	399
1445		<0.02	0.016	0.18	28.5	20.4
1446		<0.02	0.023	0.23	84.3	2.7
1447		<0.02	0.034	0.35	50.9	99.9
1448		<0.02	0.030	0.44	22.4	201
1449		<0.02	0.014	0.20	68.6	<0.1
1450		<0.02	0.025	0.58	38.4	199.5
1451		<0.02	0.055	1.61	32.8	1100
1452		<0.02	0.042	0.96	18.95	603
1453		<0.02	0.076	2.35	126.5	2100
1454		<0.02	0.127	1.52	120.0	699
1455		<0.02	0.023	0.68	28.3	298
1456		<0.02	0.023	0.88	37.0	399
1457		<0.02	0.109	97.9	2.19	401
1458		<0.02	0.017	0.27	47.4	120.0
1459		<0.02	0.014	9.67	15.95	900
1460		<0.02	0.016	0.43	34.0	139.0
1461		<0.02	0.020	1.00	15.25	1100
1462		<0.02	0.022	0.89	17.55	898
1463		<0.02	0.011	0.16	55.2	17.4
1464		<0.02	0.027	1.02	20.2	1000
1465		<0.02	0.051	6.33	37.9	602
1466		<0.02	0.053	0.69	47.3	397
1467		<0.02	0.014	0.17	55.7	26.3
1468		<0.02	0.055	2.11	32.1	1385
1469		<0.02	0.143	96.1	13.45	304



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CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
LOG-23 ME-HAL01a WEI-21