POGO MINE
SUMITOMO METAL MINING POGO LLC
MINING DONE RIGHT

P.O. Box 145, Delta Junction, AK 99737, USA
3204 International Street, Fairbanks, AK 99701, USA

Tel: +1 907 895 2736
Fax: +1 907 895 2737

December 22, 2014
COR-14-125
Certified Mail # 7011 1570 0001 1569 9317

Director, Air and Waste Management Division
United States Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

SUBJECT: Sumitomo Metal Mining Pogo LLC (Pogo), Unit 412 Incinerator Operating Limits

Dear Sir or Madame:

Enclosed is Sumitomo Metal Mining Pogo LLC (Pogo) Unit 412 Incinerator Site Specific Operating Limits Report dated December 2014 (Report). Pogo's incinerator is subject to the requirements of the Clean Air Act New Source Performance Standards (NSPS) for Commercial and Industrial Solid Waste Incineration (CISWI) Units, 40 C.F.R. Part 60, Subpart CCCC (Subpart CCCC). Pogo's incinerator is a small, remote incinerator under 40 C.F.R. Part 60 Subpart CCCC and subject to the emission limits in Table 8 of Subpart CCCC. In 2014, Pogo installed a new, two-stage wet scrubber to reduce SO_2 emissions from the incinerator.

The operating limits are identified in Pogo's Petition submitted to EPA in accordance with 40 C.F.R. § 60.2115, as well as applicable operating limits listed in Table 2 of Subpart CCCC. EPA approved Pogo's petition on September 27, 2013. An annual performance test was conducted on Unit 412 in October 2014. The performance test demonstrated compliance with all the applicable emission limits in Table 8 of Subpart CCCC. The performance test report has been submitted to EPA and ADEC.

As required in 40 C.F.R. § 60.2200(b), Pogo hereby submits the operating limit values that were established during the October 2014 performance test.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Chris Kennedy

Chris Kennedy
General Manager

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If you have any questions, please give me a call at 907-895-2761 or email me at Stacy.Staley@smmpogo.com.

Sincerely,

Stacy Staley
Sr. Environmental Coordinator

Attachment: Unit 412 Site Specific Operating Limits Final Report December 2014

Cc: Heather Valdez, EPA
Jamie McKellar, ADEC
Kyle Moselle, ADNR

SPECIALIZED
Environmental Solutions

Sumitomo Metal Mining Pogo LLC
Unit 412 Site Specific Operating Limits
Final Report

Submitted to:
Sumitomo Metal Mining Pogo LLC
Delta Junction, Alaska

Submitted By:
Specialized Environmental Solutions
Los Osos, California
December 2014

Sumitomo Metal Mining Pogo LLC (Pogo) operates a solid waste incinerator (Unit ID 412) at the Pogo Mine located near Delta Junction, Alaska. The incinerator is subject to the requirements of the Clean Air Act New Source Performance Standards (NSPS) for Commercial and Industrial Solid Waste Incineration (CISWI) Units, 40 C.F.R. Part 60, Subpart CCCC (Subpart CCCC).

In 2014, Pogo installed a two-stage wet scrubber on the incinerator outlet to achieve compliance with the applicable SO_2 emission limit of Subpart CCCC. An annual performance test was conducted on the incinerator during the period of October 7, 2014 through October 9, 2014. The source test program had two objectives: (1) to conduct the initial performance test of the CISWI unit to demonstrate compliance with all the emission limits in Table 8 of Subpart CCCC; and (2) to establish the operating limits required in 40 C.F.R. §60.2110, and reestablish the operating limits identified in Pogo's Petition submitted to EPA in accordance with 40 C.F.R. § 60.2115.

Pogo's petition identified the following seven incinerator operating parameters for which operating limits were established during the initial performance test.

- Waste Charge Rate Limit. The maximum waste charge limit was determined as the maximum rolling 1-hour average of the waste-charge weights recorded during the performance test.
- Charge Interval Limit. The minimum charge interval limit was established as the minimum time interval between waste charges recorded during the performance test.
- Primary Combustion Chamber Temperature Limit. The minimum temperature limit of the primary combustion chamber was determined as the minimum rolling 3-hour average temperature recorded during the performance test.
- Secondary Combustion Chamber Temperature Limit. The minimum temperature limit of the secondary combustion chamber was determined as the minimum rolling 3-hour average temperature recorded during the performance test.
- Primary Combustion Chamber Burn Time Limit. The minimum primary chamber burn time, following the final waste charge each day, was established as the primary burndown time of 5 hours, recorded during each day of the performance test.
- Secondary Combustion Chamber Burn Time Limit. The minimum secondary chamber burn time, following completion of the primary chamber burndown cycle, was established as the secondary burndown time of 2 hours, recorded during each day of the performance test.
- Waste Composition Limits. The maximum daily weight-percent for each waste component (i.e., municipal solid waste (MSW), sludge, and adsorbs) was determined as the maximum weight-percent of each component that was burned on any one day during the three-day performance test.

Table 2 of Subpart CCCC requires establishment of operating limits for the scrubber liquor flow rate and the scrubber liquid pH. These parameters must be monitored continuously during incinerator operation and the data must be recorded no less frequently than every 15 minutes. The operating limits were established as the minimum 3-hr average flow rate and pH values recorded during the performance test.

To establish the operating limits, all identified operating parameters were monitored and recorded by Pogo during the performance test. These monitoring data were compiled, and operating limits were calculated based on the applicable averaging times. The monitoring data and operating-limit calculations are provided as Attachment 1. Table 1 presents a summary of the operating limits.

The waste component operating limits were established according to the approach presented to Pogo by EPA during a September 18, 2013 teleconference meeting. On each test day, the waste composition consisted of different percentages of the three components: MSW, sewage sludge, and cleanup-adsorbs. The highest percentage of each waste component that was burned on one of those days established its upper bound. The waste composition's highest sludge percentage, 25 percent, occurred on test-days 1 and 2, and therefore the upper bound for sludge was established at 26 percent. The upper bound for adsorbs was established at 26 percent on test-days 1 and 2. The upper bound for MSW (combined Types II and II waste) was established at 72 percent test-day 3.

TABLE 1
OPERATING LIMITS - POGO INCINERATOR UNIT ID 412

PARAMETER	OPERATING LIMIT	AVERAGING PERIOD
Waste charge rate	Maximum charge weight = 75 lb	Rolling 1-hr average
Waste charge interval	Minimum charge interval = 15 min	none
Temperature of the primary combustion chamber	Minimum primary combustion chamber temperature = 1,350 °F	Rolling 3-hr average (of 1-min DAS measurements[2])
Temperature of the secondary combustion chamber	Minimum secondary combustion chamber temperature = 1,841 °F	Rolling 3-hr average (of 1-min DAS measurements[2])
Scrubber liquid flow rate	Minimum scrubber liquid flow rate to the scrubber inlet = 10 gph	Rolling 3-hr average (of 15-min, or less, data records)
Scrubber liquid pH	Minimum scrubber liquid pH = 3.5	Rolling 3-hr average (of 15-min, or less, data records)
Primary combustion chamber burn time	Minimum duration of primary chamber burndown cycle = 5 hr after final waste charge each operating day	none
Secondary combustion chamber burn time	Minimum duration of secondary chamber burndown cycle = 2 hr after completion of primary burndown cycle	none
Waste Composition	Maximum daily percent (by weight) of a given waste component: MSW[1] = 72% Sludge = 25% Adsorbs = 26%	Rolling 3-day average of daily waste-component percents

[1]MSW = municipal solid waste, and consists of the combined weights of Type II (dry) and Type III (wet) wastes

[2]Data acquisition system (DAS) to be installed and used for continuous monitoring of primary- and secondary-chamber temperatures, as well as waste charge rate, waste charge interval, and primary and secondary burndown times

ATTACHMENT 1

OPERATING LIMIT CALCULATIONS

PRIMARY & SECONDARY CHAMBER TEMPERATURES

Day 1	min	Primary Chamber Measured*	Primary Chamber 3-hr Ave	Secondary Chamber Measured*	Secondary Chamber 3-hr Ave
10/7/2014	0	1286	-	1857	-
I5-1	5	1176	-	1849	-
	10	1298	-	1840	-
	15	1391	-	1820	-
	20	1259	-	1846	-
	25	1314	-	1855	-
	30	1465	-	1845	-
	35	1330	-	1856	-
	40	1443	-	1831	-
	45	1455	-	1852	-
	50	1328	-	1827	-
	55	1321	-	1846	-
	60	1326	-	1825	-
	65	1330	-	1850	-
I29-1	70	1336	-	1820	-
	75	1349	-	1832	-
	80	1460	-	1869	-
	85	1480	-	1826	-
	90	1393	-	1857	-
	95	1439	-	1849	-
	100	1479	-	1863	-
	105	1447	-	1861	-
	110	1478	-	1846	-
	115	1473	-	1831	-
	120	1460	-	1825	-
	125	1472	-	1828	-
	130	1492	-	1836	-
	135	1385	-	1864	-
	140	1405	-	1856	-
	145	1478	-	1834	-
	150	1468	-	1819	-
	155	1513	-	1821	-
	160	1328	-	1829	-
	165	1378	-	1856	-
	170	1319	-	1852	-
	175	1461	1395	1828	1842
	180	1405	1398	1846	1841
	185	1471	1406	1838	1841
	190	1445	1410	1854	1841
	195	1440	1412	1843	1842
I23-1	200	1396	1416	1851	1842
	205	1477	1420	1840	1842
	210	1533	1422	1862	1842
	215	1482	1426	1832	1842
	220	1519	1428	1853	1842
	225	1509	1430	1825	1842
	230	1470	1434	1849	1842
	235	1476	1438	1914	1844
	240	1408	1440	1854	1845
	245	1469	1444	1822	1844
	250	1369	1445	1830	1844
	255	1431	1447	1842	1845
	260	1451	1447	1861	1844
	265	1490	1447	1852	1845
	270	1436	1449	1854	1845
	275	1449	1449	1834	1845
	280	1464	1449	1828	1844
	285	1432	1448	1843	1843
	290	1478	1448	1822	1842
	295	1495	1449	1840	1843
	300	1390	1447	1829	1843
	305	1395	1445	1840	1843
	310	1399	1442	1861	1844
I5-2	315	1484	1445	1859	1844
	320	1467	1447	1876	1844
	325	1451	1446	1823	1844
	330	1524	1447	1857	1845
	335	1537	1448	1831	1845
	340	1578	1455	1856	1846
	345	1527	1459	1839	1846
	350	1376	1461	1839	1845
	355	1366	1458	1850	1846
	360	1389	1458	1861	1846
	365	1416	1456	1851	1847
	Min =	1176	1395	1819	1841
	Ave =	1426	1439	1844	1844

Day 2	min	Primary Chamber Measured*	Primary Chamber 3-hr Ave	Secondary Chamber Measured*	Secondary Chamber 3-hr Ave
10/8/2014	0	1015	-	1837	-
I29-2	5	1183	-	1812	-
	10	1353	-	1826	-
	15	1399	-	1842	-
	20	1313	-	1855	-
	25	1344	-	1849	-
	30	1472	-	1835	-
	35	1357	-	1823	-
	40	1436	-	1830	-
	45	1387	-	1819	-
	50	1362	-	1850	-
	55	1452	-	1840	-
	60	1461	-	1824	-
	65	1410	-	1842	-
	70	1494	-	1829	-
	75	1400	-	1836	-
	80	1324	-	1857	-
	85	1343	-	1827	-
	90	1489	-	1833	-
	95	1264	-	1841	-
	100	1261	-	1829	-
	105	1480	-	1850	-
	110	1495	-	1825	-
I23-2	115	1435	-	1840	-
	120	1343	-	1850	-
	125	1346	-	1866	-
	130	1370	-	1850	-
	135	1390	-	1857	-
	140	1373	-	1850	-
	145	1404	-	1846	-
	150	1371	-	1859	-
	155	1378	-	1829	-
	160	1407	-	1847	-
	165	1353	-	1839	-
	170	1417	-	1854	-
	175	1440	1376	1865	1841
	180	1402	1386	1844	1841
	185	1344	1391	1834	1841
	190	1396	1392	1844	1842
	195	1395	1392	1838	1842
	200	1295	1391	1847	1842
	205	1307	1390	1856	1842
	210	1351	1387	1832	1842
	215	1282	1385	1846	1842
	220	1285	1381	1848	1843
	225	1319	1379	1841	1843
I29-3	230	1487	1382	1829	1843
	235	1446	1382	1823	1842
	240	1445	1382	1860	1843
	245	1462	1383	1863	1844
	250	1378	1380	1851	1845
	255	1416	1380	1849	1845
	260	1456	1384	1859	1845
	265	1370	1385	1846	1846
	270	1368	1381	1867	1847
	275	1378	1385	1845	1847
	280	1356	1387	1836	1847
	285	1337	1383	1825	1846
	290	1357	1379	1834	1846
	295	1293	1375	1919	1849
	300	1329	1375	1862	1849
	305	1349	1375	1831	1848
	310	1332	1374	1834	1847
	315	1321	1372	1857	1847
	320	1387	1373	1826	1847
	325	1291	1369	1836	1847
	330	1294	1367	1841	1846
	335	1300	1365	1851	1847
	340	1302	1362	1865	1847
I5-3	345	1520	1367	1845	1847
	350	1317	1364	1837	1847
	355	1325	1361	1825	1846
	360	1341	1359	1827	1845
	365	1338	1359	1833	1845
	370	1342	1358	1840	1845
	375	1369	1357	1853	1846
	380	1410	1360	1847	1846
	385	1366	1362	1832	1845
	390	1389	1363	1825	1845
	395	1422	1367	1857	1845
	Min =	1015	1357	1812	1841
	Ave =	1369	1376	1843	1845

Day 3	min	Primary Chamber Measured*	Primary Chamber 3-hr Ave	Secondary Chamber Measured*	Secondary Chamber 3-hr Ave
10/9/2014	0	1035	-	1818	-
I23-3	5	1098	-	1822	-
	10	1124	-	1826	-
	15	1085	-	1816	-
	20	1280	-	1872	-
	25	1427	-	1841	-
	30	1394	-	1826	-
	35	1313	-	1810	-
	40	1396	-	1833	-
	45	1461	-	1840	-
	50	1387	-	1819	-
	55	1329	-	1878	-
	60	1384	-	1854	-
	65	1263	-	1828	-
	70	1301	-	1837	-
	75	1357	-	1858	-
	80	1286	-	1856	-
	85	1336	-	1857	-
	90	1408	-	1821	-
	95	1284	-	1835	-
	100	1326	-	1861	-
	105	1354	-	1844	-
	110	1396	-	1866	-
I5-4	115	1402	-	1854	-
	120	1390	-	1855	-
	125	1420	-	1828	-
	130	1430	-	1860	-
	135	1376	-	1829	-
	140	1394	-	1829	-
	145	1438	-	1861	-
	150	1404	-	1825	-
	155	1446	-	1864	-
	160	1468	-	1864	-
	165	1474	-	1852	-
	170	1475	-	1836	-
	175	1455	1350	1822	1842
	180	1453	1362	1846	1842
	Min =	1035	1350	1810	1842
	Ave =	1353	1356	1842	1842

*Combustion chamber temperature recorded manually at 5-minute intervals

Minimum Rolling 3-hr Average Temperatures		
Primary Chamber =	1350	F
Secondary Chamber =	1841	F

CHARGE RATES

Date	Run ID	Waste Charge Wt (lb) Measured	1-Hr Average*
10/7/201	I5-1	42	-
		58	-
		49	-
		61	53
10/7/2014	I29-1	51	55
		48	52
		65	56
		55	55
		52	55
		63	59
		59	57
		61	59
10/7/2014	I23-1	55	60
		64	60
		58	60
		54	58
		67	61
		61	60
		56	60
10/7/2014	I5-2	70	64
		72	65
		79	69
10/8/2014	I29-2	67	72
		51	67
		59	64
		54	58
		55	55
		67	59
		77	63
10/8/2014	I23-2	50	62
		78	68
		59	66
		57	61
		56	63
		78	63
		74	66
10/8/2014	I29-3	65	68
		76	73
		50	66
		53	61
		60	60
		53	54
		58	56
10/8/2014	I5-3	76	62
		72	65
		83	72
10/9/2014	I23-3	69	75
		76	75
		60	72
		69	69
		63	67
		53	61
		75	65
10/9/2014	I5-4	64	64
		76	67
		55	68
		35	58
Maximum		**83**	**75**

*Rolling 1-hr average based on typical charge interval of approx. 15 minutes

WASTE COMPOSITIONS - DAY 1

Date	Run ID	Charge No.	Type II (lb)	Type III (lb)	Sludge (lb)	Adsorbs (lb)	Total (lb)
10/7/201	I5-1	1	42				42
		2			29	29	58
		3	26	23			49
		4			23	38	61
10/7/2014	I29-1	1	19	32			51
		2			27	21	48
		3	22	43			65
		4			30	25	55
		5	24	28			52
		6			31	32	63
		7	35	24			59
		8			30	31	61
10/7/2014	I23-1	1			28	27	55
		2	34	30			64
		3			29	29	58
		4	16	38			54
		5			30	37	67
		6	24	37			61
		7			27	29	56
10/7/2014	I5-2	1	35	35			70
		2			38	34	72
		3	26	53			79
TOTAL			303	343	322	332	1300

Component	MSW[1]	Sludge	Adsorbs
Percent	49.7%	24.8%	25.5%

[1]MSW = Type II + Type III

WASTE COMPOSITIONS - DAY 2

Date	Run ID	Charge No.	Type II (lb)	Type III (lb)	Sludge (lb)	Adsorbs (lb)	Total (lb)
10/8/2014	I29-2	1			31	36	67
		2	17	34			51
		3			28	31	59
		4	18	36			54
		5			28	27	55
		6	33	34			67
		7			29	48	77
10/8/2014	I23-2	1			28	22	50
		2	20	58			78
		3			29	30	59
		4	19	38			57
		5			29	27	56
		6	41	37			78
		7			30	44	74
10/8/2014	I29-3	1	28	37			65
		2			29	47	76
		3	26	24			50
		4	39	14			53
		5			28	32	60
		6	25	28			53
		7			31	27	58
10/8/2014	I5-3	1	30	46			76
		2	13	59			72
		3			61	22	83
TOTAL			309	445	381	393	1528

Component	MSW[1]	Sludge	Adsorbs
Percent	49.3%	24.9%	25.7%

[1]MSW = Type II + Type III

WASTE COMPOSITIONS - DAY 3

Date	Run ID	Charge No.	Type II (lb)	Type III (lb)	Sludge (lb)	Adsorbs (lb)	Total (lb)
10/9/2014	I23-3	1	22	47			69
		2			31	45	76
		3	24	36			60
		4			31	38	69
		5	31	32			63
		6			30	23	53
		7	21	54			75
10/9/2014	I5-4	1	22	42			64
		2	34	42			76
		3	19	36			55
		4	16	19			35
TOTAL			189	308	92	106	695

Component	MSW[1]	Sludge	Adsorbs
Percent	71.5%	13.2%	15.3%

[1]MSW = Type II + Type III