Perpetua Resources Corp.
405 S. 8th Street, Ste 201
Boise, ID 83702
Tel: 208.901.3060
www.perpetuaresources.com

October 6, 2021

Kelli Wetzel
Permit Writer, Air Quality Division
Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83706

Subject: **Facility ID No. 085-00011, Perpetua Resources Idaho, Inc., Stibnite Gold Project –TAP Addendum Report**

Dear Ms. Wetzel:

Perpetual Resources, Inc. is providing the enclosed TAP Addendum report (Addendum) for the Stibnite Gold Project. The Addendum contains the hazardous air pollutant (HAP) and toxic air pollutant (TAP) emissions calculations provided in the PTC application and as requested by IDEQ, supplements that information to support IDEQ's responses to comments.

If you have any questions regarding this submittal, please contact me at 208-901-3053 or alan.haslam@perpetua.us.

Thank you for reviewing this information.

Sincerely,
Perpetua Resources

Alan Haslam
Vice President – Permitting

Enclosure: TAP Addendum Report

AIR SCIENCES INC.

DENVER • PORTLAND • LOS ANGELES

Stibnite Gold Project Permit to Construct Application

TAP Addendum

Prepared For:
PERPETUA RESOURCES IDAHO, INC.

PROJECT NO. 335-21-404
OCTOBER 5, 2021

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1.0 INTRODUCTION

On September 10, 2020 and February 18, 2021, the Idaho Department of Environmental Quality (IDEQ) provided notices for public comment on the Perpetua Resources Idaho, Inc. (hereafter referred to as Perpetua Resources) Stibnite Gold Project (SGP) complete application materials (Application), draft permit to construct (Draft PTC), and statement of basis (SOB). The public comments received included requests for additional information regarding hazardous air pollutant (HAP) and toxic air pollutant (TAP) emission estimates and modeling.

The purpose of this TAP Addendum (Addendum) is to provide that additional information to support IDEQ's responses to comments. The information provided in this Addendum confirms the following determinations made by Perpetua Resources and IDEQ at the time of the public notices:

1. The SGP is an area source for HAP emissions.

2. The SGP complies with the Idaho TAP provisions (IDAPA 58.01.01.210).

3. The SGP complies with the Idaho mercury rule (IDAPA 58.01.01.215).

This Addendum supplements information in the complete Application and supports those determinations highlighted during the public comment. Section 2.0 provides a description of the HAP/TAP emission calculations and source status. Section 3.0 provides a TAP emissions evaluation and modeling analysis, including TAP emission sources covered by IDAPA 58.01.01.210.20. Section 4.0 compares arsenic modeling analyses for actual and potential arsenic emissions. Section 5.0 provides a discussion of the emission reductions that demonstrate compliance with carcinogenic TAPs. Section 6.0 provides a Toxic Air Pollutant Reasonably Available Control Technology (T-RACT) analysis. Section 7.0 provides proposed permit conditions for demonstrating compliance with carcinogenic TAPs, and Section 8.0 provides a discussion of mercury emissions, including mercury emission sources covered by IDAPA 58.01.01.215.01.

IDAPA 58.01.01.210 and 215 reduce the information required from a PTC applicant and streamline the PTC review required by IDEQ in those circumstances where the HAP/TAP emissions are covered or addressed by federal regulations (IDAPA 58.01.01.210) or the mercury emissions are below a specific exemption threshold (IDAPA 58.01.01.215). Perpetua Resources referenced these rules in the Application and relied on these provisions to present a complete HAP/TAP emissions inventory that aligned with these rules. To support IDEQ's responses to public comments, IDEQ requested that Perpetua Resources expand its HAP/TAP analyses beyond the requirements of these rules and reconfirm compliance with TAP thresholds. This additional work reconfirms IDEQ's earlier findings that the SGP is an area source, and the proposed HAP/TAP emissions comply with IDAPA 58.01.01.210 and 215.

2.0 HAP/TAP EMISSIONS

During the two IDEQ public comment periods, IDEQ received comments regarding the following:

1. SGP source status for HAPs
2. Metal HAP/TAP emissions from fugitive dust
3. Metal HAP/TAP emissions from the autoclave and lime kiln processes
4. Fugitive emissions of hydrogen cyanide (HCN)

To support IDEQ's responses to comments and confirm the SGP area source status, the potential-to-emit (PTE)[1] HAP/TAP emission inventory in Appendix A of this Addendum contains emission calculations for all HAPs and TAPs emitted from all the SGP processes, including:

- Metals from mining fugitive dust emissions
- Metals from ore processing, ore concentration and refining, and lime, aggregate, and concrete production
- Antimony (Sb) emissions from the Sb drying and bagging circuit
- Sulfuric acid (H_2SO_4) and hydrogen sulfide (H_2S) from the autoclave, and hydrochloric acid (HCl) emissions and lime kiln
- Evaporative HCN from cyanide leaching and the tailings storage facility
- Various HAPs/TAPs from fuel storage and combustion
- Carbon disulfide emissions from the use of xanthate
- Evaporative mercury from mining surfaces

This HAP/TAP emission inventory was conducted for all 14 modeling scenarios evaluated in the Application. The emissions provided in Appendix A reflect the highest emissions scenario (HAP/TAP Emission Calculations – Scenario W3, 180,000 T/day).[2]

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[1] PTE in this Addendum refers to the potential emissions after applying all proposed *air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed* per IDAPA 58.01.01.006.88 (i.e., PTE is the proposed permitted emissions).

[2] HAP/TAP Emission Calculations – Scenario W3, 180,000 T/day: HAP/TAP emissions based on the potential mining production rate of 180,000 tons per day (T/day) and the highest emissions scenario (Modeling Scenario W3).

2.1 Description of HAP Source Status

2.1.1 Controlled HAP Emissions

The controlled HAP emissions (PTE) from the SGP are below the major source thresholds; therefore, the SOB classified the SGP as an area source for HAP emissions. This is consistent with EPA's determination that all U.S. gold mine ore processing and production facilities are area sources.[3] The emissions inventory provided in Appendix A shows the total HAP emissions are 3.67 tons per year (ton/yr) for a single HAP and 12.56 ton/yr for all the HAPs combined for the highest emissions scenario (Modeling Scenario W3). The major source levels are 10 ton/yr for a single HAP and/or 25 ton/yr for all the HAPs combined.

2.1.2 Uncontrolled HAP Emissions

Uncontrolled HAP emissions are estimated to exceed 25 ton/yr, combined; therefore, to support the area source designation, Perpetua Resources committed to operational limitations and emission controls in the Application that achieve area source status.

2.2 Description of HAP/TAP Emission Calculations

This section provides a brief description of the methods used to calculate the HAP/TAP emissions provided in Appendix A. The references used for the HAP/TAP calculations were presented in the Application. Any new references are provided in this section.

2.2.1 Metal Emissions from Mining Fugitive Dust

The metal HAP/TAP emissions from fugitive dust generated by mining activities (drilling, blasting, excavating, hauling, etc.) were calculated by multiplying the HAP/TAP-specific median metal concentration in the ore[4] by the activity-specific total particulate matter (PM) emissions. The median metal concentrations were derived from over 55,000 core samples taken primarily from the more mineralized zones of the SGP pits (i.e., in and around gold ore deposits).

This emissions inventory does not reflect any of the emission reductions described in Section 5.0 for carcinogenic TAP compliance.

[3] *EPA recently gathered data and evaluated emissions of other HAP, including cyanide and non-mercury metals. The data indicate that the gold mining processing and production category consists of only area sources (i.e., facilities that emit less than ten tons per year of any one HAP and less than 25 tons per year of any combination of HAP)* (EPA 2010).

[4] Iron (Fe) and selenium (Se) were not included in the Application because the concentrations of these metals were similar to typical crustal abundance levels. In response to comments on HAPs/TAPs emissions, the concentrations of these metals (18,200 ppm of Fe and 0.4 ppm of Se) are provided (Midas Gold 2020).

2.2.2 Metal Emissions from Ore Processing and Lime/Aggregate Production

2.2.2.1 Crushing, Screening, and Material Handling

The metal HAP/TAP emissions generated by process and production sources (the crushing, screening, and handling of ore, limestone, lime, and aggregate) were calculated by multiplying the PM emissions from these sources by the median concentration of metals in the ore, limestone, lime, or aggregate. The ore median metal concentrations are discussed in Section 2.2.1. The limestone, lime, and aggregate metal concentrations are provided in Table 1.

The limestone metal concentrations were measured from core hole samples through the middle marble formation in the proposed limestone quarry's footprint. These rock samples were specifically analyzed to assess the formation as a viable limestone source. As a conservative estimate, the limestone metal profile was also used for aggregate production.

Table 1. Metal TAP Concentrations for Limestone and Lime

CAS	TAP Name	Concentration (ppm) [1]
7440-38-2	Arsenic	23
7440-41-7	Beryllium	0.8
7440-43-9	Cadmium	0.25
7440-48-4	Cobalt	4
7440-47-3	Chromium	15
7439-97-6	Mercury	0.02
7439-96-5	Manganese	236.5
7440-02-0	Nickel	5
7439-92-1	Lead	3
7440-36-0	Antimony	2.5
7723-14-0	Phosphorus	130
7440-22-4	Silver	0
7429-90-5	Aluminum	22,600
7440-39-3	Barium	145
1317-65-3	Calcium Carbonate [2]	274,500
1305-78-8	Calcium Oxide [3]	740,000
7440-50-8	Copper	5
7439-89-6	Iron	10,350
7439-98-7	Molybdenum	0.5
7440-28-0	Thallium	5
7440-61-1	Uranium	5

CAS	TAP Name	Concentration (ppm) [1]
7440-62-2	Vanadium	15.5
7440-33-7	Tungsten	5
7440-66-6	Zinc	18

[1] Median of 98 samples of the SGP limestone material (M3 2018).
[2] Calcium carbonate ($CaCO_3$) is used for limestone processing.
[3] Calcium oxide (CaO) is used for lime processing. 40% to 74% CaO (NLA 2007).

2.2.2.2 Lime Kiln

The non-mercury metal HAP/TAP emissions from the lime kiln were calculated by multiplying the PM emissions by the median concentration of metals in the limestone shown in Table 1. The mercury emissions from the lime kiln were conservatively estimated by assuming all mercury in the limestone feed is volatilized and emitted.

2.2.2.3 Autoclave

Mercury emissions from the SGP autoclave were based on the SysCAD modeling of the SGP autoclave performed by Perpetua Resources' engineering contractor: M3 Engineering. This modeling predicted 0.0105 grams per second of mercury emissions exiting the autoclave mercury control system, which is comprised of a venturi scrubber, a vent gas cleaning tower, a vent gas steam condensation tower, and one or more sulfur-impregnated activated carbon filters.

The non-mercury metal HAP/TAP emissions from the autoclave mercury control system are expected to be less than the mercury emissions because non-mercury HAP/TAP emissions are only particulates and more easily controlled by the emissions control system. Mercury emissions move through the control system as both particulate and gas. For this review, the non-mercury HAP/TAP emissions were conservatively assumed to be equal to the mercury emissions.

2.2.2.4 EW Cells, Pregnant Solution Tank, Retort, Furnace, and Carbon Kiln

Mercury emissions from the SGP electrowinning (EW) cells, pregnant solution tank, mercury retort, induction melting furnace, and carbon regeneration kiln were calculated based on stack test data from similar sources utilizing similar mercury control systems at Nevada gold mines.

The non-mercury metal HAP/TAP emissions exiting these mercury control systems are expected to be less than the mercury emissions because non-mercury HAP/TAP emissions are only particulates and more easily controlled by the emissions control system. Mercury emissions move through the control system as both particulate and gas. For this review, the non-mercury HAP/TAP emissions were conservatively assumed to be equal to the respective mercury emissions.

2.2.2.5 Antimony Dryer and Dry Bagging

The Sb circuit proposed in the Application was replaced with a new dewatering/packaging circuit. The new circuit eliminates the potential for metal emissions from dust and mercury evaporation emissions from concentrate heating. Instead, the Sb concentrate will be dewatered using a filter press and then bagged as a wet (damp) product. There are no HAP/TAP emissions associated with this new circuit.

2.2.3 Metal Emissions from Concrete Production

The metal HAP/TAP emissions from concrete production were calculated using EPA emission factors from AP-42 Section 11.12, Concrete Batching. This section provides controlled emission factors for cement silo filling and central mix batching. There are no emission factors for cement silo unloading. Therefore, the cement silo filling factors were used for cement silo unloading as a conservative estimate.

Chromium (VI) percentages of the total chromium were provided by IDEQ for cement silo filling and central mix batching. These percentages were used to calculate chromium (VI) emissions from cement silo filling and unloading and central mix batching.

There are no HAP/TAP emission factors for the dust generated from aggregate handling in the concrete production process. As a conservative estimate, the limestone metals profile provided in Table 1 of Section 2.2.2.1 was used to estimate the HAP/TAP emissions from aggregate handling.

2.2.4 H_2SO_4 and H_2S Emissions from the Autoclave

H_2SO_4 and H_2S emissions from the SGP autoclave were calculated based on source test data from similar autoclaves at gold mines in Nevada.

2.2.5 HCl Emissions from the Lime Kiln

The HCl emissions from the lime kiln were calculated using the HCl emission factor obtained from EPA's EPCRA Section 313 Guidance for Reporting Hydrochloric Acid (EPA 1999b).

2.2.6 HCN Emissions from Cyanide Leaching and Tailings Storage Facility

The evaporative HCN emissions from cyanide leaching and the tailings storage facility were calculated using the flux methodology developed by EPA and the Nevada Mining Association as part of the 40 CFR 63 rule-making process. The methodology is based on empirical measurements at several gold mines in Nevada taken under the direction of EPA. Numerous gold mines in several states have used this method since its development in 2010.

2.2.7 HAP/TAP Emissions from Fuel Storage and Fuel Combustion

HAP/TAP emissions from fuel combustion (propane and diesel) were calculated using fuel combustion rates and the applicable EPA AP-42 emission factors.

HAP/TAP emissions from fuel storage (gasoline) were calculated from the tank volatile organic compound (VOC) emissions multiplied by the weight percentages of HAP/TAP in the fuel. The percentages were obtained from EPA's EPCRA Section 313 Industry Guidance Metal Mining Facilities, Table 3-8 for gasoline (EPA 1999a).

2.2.8 Carbon Disulfide Emissions from Xanthate

Carbon disulfide (CS_2) emissions from potassium amyl xanthate (PAX) use were calculated based on the decomposition of xanthate to CS_2 gas. The decomposition rate was determined from published experimental data.

2.2.9 Evaporative Mercury Emissions from Mining Surfaces

Mercury can evaporate from rock surfaces in pits, tailings facilities, development rock storage facilities, and stockpiles. The rate of mercury evaporation (or flux) is a function of the mercury concentration in the material. Mercury flux rates and concentration measurements taken at a gold mine in Nevada were adjusted for the SGP mercury concentrations to estimate mercury flux emissions from the SGP pits, tailings facility, development rock storage facilities, and ore stockpiles.

3.0 TAP ANALYSIS

A complete inventory of the PTE TAP emissions is provided in Appendix A, as discussed in Section 2.0. Appendix A also identifies the applicability of IDAPA 58.01.01.210.20. According to IDAPA 58.01.01.210.20, no further demonstration of compliance with the TAP provisions is required to obtain a PTC for new source emissions, such as the SGP, from:

a. The equipment or activities covered by a New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAP); or

b. The source category of equipment or activities addressed by a NSPS or NESHAP even if the specific equipment or activity is not subject to compliance requirements under the federal rule.

After applying IDAPA 58.01.01.210.20 as described in Section 3.1, the remaining TAP emissions are subject to further compliance demonstration and are compared to the screening emission levels (EL) described in Section 3.3. TAP emissions that below the screening EL, require no further demonstration of compliance with the TAP provisions. TAP emissions above the screening EL require modeling, as described in Section 3.4. To identify the TAPs subject to review, Section 3.2 provides a comparison of the metals analyzed in the SGP ore, development rock, and limestone to the TAPs listed in IDAPA 58.01.01.585 and IDAPA 58.01.01.586.

3.1 Equipment or Activities Covered or Addressed by NESHAP or NSPS

In accordance with IDAPA 58.01.01.210.20, the equipment and activities at the SGP that are either covered or addressed by NESHAP or NSPS are discussed in the following subsections. TAPs emitted from these sources that are also HAPs require no further evaluation to demonstrate compliance with the TAP provisions. TAP emissions from these sources that are not HAPs require additional review to demonstrate compliance with the TAP provisions.

3.1.1 NESHAP Subpart ZZZZ

40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines covers HAP emissions from the SGP emergency generators and fire pump (Source ID No. EDG1, EDG2, EDG3, and EDFP). IDAPA 58.01.01.210.20(a) applies to Source ID No. EDG1, EDG2, EDG3, and EDFP.

3.1.2 NESHAP Subpart AAAAA

40 CFR 63, Subpart AAAAA, NESHAP for Lime Manufacturing Plants addresses HAP emissions from the SGP lime manufacturing sources (Source ID No. LS12, LK, LS-L/U, LCR, and LKC).[5] IDAPA 58.01.01.210.20(b) applies to Source ID No. LS12, LK, LS-L/U, LCR, and LKC.

3.1.3 NESHAP Subpart CCCCCC

40 CFR 63, Subpart CCCCCC, NESHAP for Source Category: Gasoline Dispensing Facilities covers the SGP gasoline storage tanks (Source ID No. TG1 and TG2). IDAPA 58.01.01.210.20(a) applies to Source ID No. TG1 and TG2.

3.1.4 NESHAP Subpart EEEEEEE

40 CFR 63, Subpart EEEEEEE, NESHAP: Gold Mine Ore Processing and Production Area Source Category covers HAP emissions from the SGP autoclave (Source ID No. AC) and the EW cells, pregnant solution tank, mercury retort, induction melting furnace, and carbon regeneration kiln (Source ID No. EW, MR, MF, and CKD). IDAPA 58.01.01.210.20(a) applies to Source ID No. AC, EW, MR, MF, and CKD.

The NESHAP source category addresses HAP emissions from mining activities, specifically fugitive dust-generating activities (drilling, blasting, excavating, hauling, etc.), explosives use and storage (Source ID No. PS), cyanide leaching (Source ID No. CIP Leach 1-4, CIL 1-6, CIP 1-6, and CN Detox 1-2), tailings storage, ore processing (Source ID No. OC1-13), ore processing heating (Source ID No. ACB, CKB, PV, and HS), and the ore processing reagent use of PAX and sodium cyanide (NaCN). The NESHAP source category is defined as "*Gold Ore Mining ..., NAICS code 212221, Establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) ores valued chiefly for their gold content. Establishments primarily engaged in transformation of the gold into bullion or doré bar in combination with mining activities are included in this industry*" (EPA 2011b). EPA's rule-making docket (Docket ID EPA-HQ-OAR-2010-0239) provides documents evaluating HAP metal emissions from mining fugitive dust, HCN emissions from cyanide leaching, and downwind HCN ambient concentrations.[6]

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[5] NESHAP Subpart AAAAA defines the affected source as follows: *each lime kiln and its associated cooler, each individual PSH [processed stone handling] system. The individual types of emission units in a PSH system are conveying system transfer points, bulk loading or unloading systems, screening operations, bucket elevators, and belt conveyors-if they follow the processed stone storage bin or storage pile in the sequence of PSH operations. The materials processing operations (MPO) associated with lime products (such as quicklime and hydrated lime), lime kiln dust handling, quarry or mining operations, limestone sizing operations, and fuels are not subject to today's final NESHAP. Processed stone handling operations are further distinguished in the final NESHAP as follows: (1) whether their emissions are vented through a stack, (2) whether their emissions are fugitive emissions, (3) whether their emissions are vented through a stack with some fugitive emissions from the partial enclosure, and/or (4) whether the source is enclosed in a building* (69 Fed. Reg. 394, 397 (January 5, 2004)).

[6] EPA-HQ-OAR-2010-0239-0132, *Profile of the Metal Mining Industry;* EPA-HQ-OAR-2010-0239-0157, *Recommended Methodology for Quantification of Fugitive Dust Metals Emissions from Mining Activities for Title V Applicability;* EPA-HQ-OAR-2010-0239-0102, *QAPP Comprehensive Air Emissions Testing for Hydrogen Cyanide;* EPA-HQ-OAR-2010-0239-0134, -0135 -0136 -0137 -0161 -0162 -0378, *Meteorological and Hydrogen Cyanide (HCN) Fence Line Monitoring* reports.

In response to public comments, this Addendum applies IDAPA 58.01.01.210.20(a) to those sources of HAP emissions at the SGP that are covered by Subpart EEEEEEE. This Addendum provides further evaluation of the sources of HAP emissions that are addressed by the NESHAP per IDAPA 58.01.01.210.20(b) – the mining emissions.[7]

3.1.5 NSPS Subpart LL

40 CFR 60, Subpart LL, Standards of Performance for Metallic Mineral Processing Plant covers the SGP ore processing (Source ID No. OC1-13). IDAPA 58.01.01.210.20(a) applies to Source ID No. OC1-13.

3.1.6 NSPS Subpart OOO

40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants covers the SGP limestone processing sources (Source ID LS1-11 and LSBM), aggregate production (Source ID No. PCSP1 and PCSP2), and aggregate handling in the concrete production process (Source ID No. CA-L/U). IDAPA 58.01.01.210.20(a) applies to Source ID No. LS1-11, LSBM, PCSP1, PCSP2, CA-L/U.

3.2 Metals Review for TAP Provisions Applicability

Table 2 provides a comparison of the metals analyzed in the SGP ore, development rock, and limestone to the TAPs listed in IDAPA 58.01.01.585 and IDAPA 58.01.01.586.

Table 2. Metals Comparison to IDAPA 58.01.01.585-586 TAPs

Metal			TAP		
CAS	**Name**	**HAP?**	**CAS**	**Name**	**Is the Metal a TAP?**
7440-57-5	Gold	No	7440-57-5	Not listed	No
7440-22-4	Silver	No	7440-22-4	Silver - Including metal soluble compounds, as Ag	Yes, same CAS Yes, similar form No
7429-90-5	Aluminum	No	7429-90-5	Aluminum, including: Metal & Oxide Pyro powders Soluble salts	Yes, same CAS Yes, similar form No No
7440-36-0	Antimony	Yes	7440-36-0	Antimony & compounds, as Sb (handling & use)	Yes, same CAS
7440-38-2	Arsenic	Yes	7440-38-2	Arsenic compounds	Yes, same CAS
7440-39-3	Barium	No	7440-39-3	Barium, soluble compounds, as Ba	Yes, same CAS
7440-41-7	Beryllium	Yes	7440-41-7	Beryllium & compounds	Yes, same CAS

[7] A demonstration of compliance that applied IDAPA 58.01.01.210.20(a) and (b) to the sources of HAP emissions covered and addressed by the NESHAP is presented in the SOB (February 18, 2021).

Metal			TAP		
CAS	**Name**	**HAP?**	**CAS**	**Name**	**Is the Metal a TAP?**
7440-69-9	Bismuth	No	1304-82-1	Bismuth telluride undoped Bismuth telluride if selenium doped	No, Bi compounds are expected to be bismuthinite ($Bi2S_3$) and bismite (Bi_2O_3) [1]
7440-43-9	Cadmium	Yes	7440-43-9	Cadmium and compounds	Yes, same CAS
7440-70-2	Calcium	No	1317-65-3 156-62-7 1305-62-0 1305-78-8 1344-95-2 13397-24-5	Calcium carbonate Calcium cyanamide Calcium hydroxide Calcium oxide Calcium silicate (synthetic) Calcium sulfate	Yes [2] No, different CAS No, different CAS Yes [2] No, different CAS No, different CAS
7440-47-3	Chromium	Yes	7440-47-3 7440-47-3 16065-83-1 18540-29-9	Chromium metal, including: Chromium (II) compounds, as Cr Chromium (III) compounds, as Cr Chromium (VI) & compounds, as Cr+6	Yes, same CAS Yes, same CAS No, different CAS No, different CAS
7440-48-4	Cobalt	Yes	10210-68-1 16842-03-8 7440-48-4	Cobalt carbonyl, as Co Cobalt hydro carbonyl, as Co Cobalt metal, dust, and fume	No, different CAS No, different CAS Yes, same CAS
7440-50-8	Copper	No	7440-50-8	Copper: Fume Dusts & mists, as Cu	Yes, same CAS No Yes, similar form
7440-55-3	Gallium	No		Not listed	No
7439-89-6	Iron	No	1309-37-1 13463-40-6 7439-89-6	Iron oxide fume (Fe2O3), as Fe Iron pentacarbonyl, as Fe Iron salts, soluble, as Fe	No, different CAS No, different CAS Yes, same CAS
7439-91-0	Lanthanum	No		Not listed	No
7440-09-7	Potassium	No	1310-58-3	Potassium hydroxide	No, different CAS
7439-92-1	Lead	Yes		Not listed	No, criteria pollutant
7439-95-4	Magnesium	No	1309-48-4	Magnesium oxide fume	No, different CAS
7439-96-5	Manganese	Yes	7439-96-5	Manganese, as Mn, including: Dust & compounds Fume	Yes, same CAS Yes, similar form No
7439-97-6	Mercury	Yes		Not listed	No, regulated by mercury rules
7439-98-7	Molybdenum	No	7439-98-7	Molybdenum, as Mo, including: Soluble compounds Insoluble compounds	Yes, same CAS No Yes, similar form
7440-02-0	Nickel	Yes	7440-02-0 12035-72-2 7440-02-0	Nickel Nickel Subsulfide Nickel Refinery Dust	No, see Ni refinery dust No, different CAS Yes, same CAS and form

Metal			TAP		
CAS	**Name**	**HAP?**	**CAS**	**Name**	**Is the Metal a TAP?**
7723-14-0	Phosphorus	Yes	7723-14-0	Phosphorus	Yes, same CAS
			10025-87-3	Phosphorus oxychloride	No, different CAS
			10026-13-8	Phosphorus penta-chloride	No, different CAS
			1313-80-3	Phosphorus penta-sulfide	No, different CAS
			1314-56-3	Phosphorus pentoxide (ID)	No, different CAS
			7719-12-2	Phosphorus trichloride	No, different CAS
7782-49-2	Selenium	Yes	7782-49-2	Selenium and compounds, as Se	Yes, same CAS
7440-23-5	Sodium	No	26628-22-8	Sodium azide (CL)	No, different CAS
			7631-90-5	Sodium bisulfite	No, different CAS
			136-78-7	Sodium 2,4-dichloro-phenoxyethyl sulfate; see Sesone	No, different CAS
			62-74-8	Sodium fluoroacetate	No, different CAS
			1310-73-2	Sodium hydroxide	No, different CAS
			7681-57-4	Sodium metabisulfite	No, different CAS
7440-20-2	Scandium	No		Not listed	No
7440-24-6	Strontium	No		Not listed	No
7440-28-0	Thallium	No	7440-28-0	Thallium, soluble compounds, as Tl	Yes, same CAS
7440-29-1	Thorium	No		Not listed	No
7440-32-6	Titanium	No		Not listed	No
7440-33-7	Tungsten	No	7440-33-7	Tungsten, including: Insoluble compounds Soluble compounds	Yes, same CAS Yes, similar form No
7440-61-1	Uranium	No	7440-61-1	Uranium (natural) soluble & insoluble compounds, as U	Yes, same CAS
7440-62-2	Vanadium	No	1314-62-1	Vanadium, as V_2O_5 Respirable dust & fume	No, different CAS [3]
			12604-58-9	Ferrovanadium dust	No, different CAS
7440-66-6	Zinc	No	7440-66-6	Zinc metal (ID)	Yes, same CAS
			7646-85-7	Zinc chloride fume	No, different CAS
			1314-13-2	Zinc oxide fume	No, different CAS
			1314-13-2	Zinc oxide dust	No, different CAS

[1] Over 95% of the samples were at or below the detection limit for Bismuth of 2 ppm. Limited sampling for tellurium indicates 90% of the samples are below 0.5 ppm. Mineralogical studies have not identified telluride minerals as a significant phase in the deposits. Based on these low levels and deposit mineralogy, no significant bismuth telluride is expected to be found in the ore body or development rock.

[2] Although the CAS numbers do not match, the calcium in the ore, limestone, and aggregate is expected to be in the form of calcium carbonate ($CaCO_3$). For lime, the calcium will be in the form of calcium oxide (CaO).

[3] The principal vanadium mineral in Idaho shale-hosted vanadium deposits is metahewettite ($CaV_6O_{162} \bullet H2O$) (USGS n.d.). Although not a TAP, vanadium in the ore, limestone, and aggregate is conservatively assumed to be V_2O_5 for the purpose of the TAP evaluation included in this HAP/TAP Addendum.

3.3 Screening Level Analysis of TAP Emissions

As discussed in Section 2.0, the highest TAP emissions scenario is Model Scenario W3, that estimates emissions from a potential throughput of 180,000 T/day. Table A in Appendix A

provides a summary of the TAP emissions for Model Scenario W3, identifies whether the sources are covered or addressed by IDAPA 58.01.01.210.20(a) or (b) (Section 3.1), and notes the TAP screening EL. TAPs that exceed the screening EL are highlighted in Table A. These TAPs require further demonstrations of compliance with the applicable ambient air concentration (AAC) and are listed in Table 3 below.

Table 3. TAPs Exceeding the Screening Emission Level

CAS	TAP Name	Carcinogenic	SGP PTE (lb/hr) [1]	Screening EL (lb/hr)
7429-90-5	Aluminum	No	58.50	0.667
7440-38-2	Arsenic	Yes	0.544	0.0000015
7440-39-3	Barium	No	0.659	0.033
7440-41-7	Beryllium	Yes	0.00261	0.000028
7440-43-9	Cadmium	Yes	0.000435	0.0000037
1317-65-3	Calcium Carbonate	No	13.65	0.667
1305-78-8	Calcium Oxide	No	0.696	0.133
592-01-8	Cyanide	No	0.453	0.333
50-00-0	Formaldehyde	Yes	0.00189	0.00051
7439-89-6	Iron	No	15.04	0.067
7439-96-5	Manganese	No	0.244	0.067
7440-02-0	Nickel	Yes	0.00169	0.000027
7723-14-0	Phosphorus	No	0.530	0.007
7664-93-9	Sulfuric Acid	No	2.03	0.067
7440-28-0	Thallium	No	0.00867	0.007
7440-62-2	Vanadium	No	0.0237	0.003

[1] Model Scenario W3, 180,000 T/day Emissions

3.4 Modeling of TAP Emissions

To maintain consistency with the National Ambient Air Quality Standards (NAAQS) compliance analyses reviewed by IDEQ, the TAP modeling was performed using the same IDEQ-approved datasets and model versions described in the SOB from February 18, 2021. TAP modeling was conducted for the 14 modeling scenarios consistent with the NAAQS analyses. Scenario W5 was eliminated from the arsenic modeling, as discussed in Section 3.4.5.

3.4.1 Meteorological Data and Deposition

The meteorological dataset used for the TAP modeling was processed using EPA's Qian and Venkatram (Q&V) meteorological processing method. This method, which does not use the BULKRN keyword, is approved by EPA as a default method.

As discussed in the PTC application, EPA evaluated the performance of the model with the Q&V processed meteorological dataset as part of its model approval determination. This evaluation quantified the bias between the modeled concentrations and the actual observed concentrations. The results of EPA's evaluation showed a conservative bias of the model to overpredict concentrations by a factor of 1.41 to 3.21 (Air Sciences 2020, A-8 of Attachment A). Therefore, the meteorological dataset used in the TAP modeling is expected to predict conservatively high concentrations.

The particulate deposition parameters used in the NAAQS compliance analysis were derived for PM_{10} and $PM_{2.5}$. See Tables 24 and 25 in the SOB from February 18, 2021. Dust-related metal TAP emissions include total particulates (all size fractions of PM up to PM_{30}). Therefore, the deposition parameters for PM were calculated using the same methodology and EPA references used for PM_{10} and $PM_{2.5}$ in the NAAQS compliance analysis. The PM deposition parameters are provided in Table 4.

Table 4. PM Deposition Parameters by Source Category

Source Category	Parameter	PM				
		Bin 1	**Bin 2**	**Bin 3**	**Bin 4**	**Bin5**
Haul Roads	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction	0.02	0.23	0.75	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3) (DR average of YP, HF, WE)	2.46	2.46	2.46	--	--
Material Handling (Ore, DR, Limestone)	Bin Upper Diameter (µm)	2.50	5.00	10.00	30.00	--
	Mass Fraction	0.07	0.20	0.20	0.53	--
	Mass Mean Diameter (µm)	2.50	5.00	10.00	30.00	--
	Density (g/cm^3) (Ore)	Pit-specific, see Table 5				
	Density (g/cm^3) (DR)	Pit-specific, see Table 5				
	Density (g/cm^3) (Limestone)	1.09	1.09	1.09	1.09	--
Baghouses	Bin Upper Diameter (µm)	2.50	6.00	10.00	30.00	--
	Mass Fraction	0.25	0.45	0.20	0.10	--
	Mass Mean Diameter (µm)	2.50	6.00	10.00	30.00	--
	Density (g/cm^3) (Ore)	Pit-specific, see Table 5				
Diesel Engines	Bin Upper Diameter (µm)	1.00	2.50	6.00	10.00	30.00
	Mass Fraction	0.82	0.08	0.03	0.03	0.04
	Mass Mean Diameter (µm)	1.00	2.50	6.00	10.00	30.00
	Density (g/cm^3) (Diesel Combustion)	1.00	1.00	1.00	1.00	1.00
Heaters and Boilers	Bin Upper Diameter (µm)	1.00	2.50	6.00	10.00	30.00
	Mass Fraction	0.23	0.22	0.25	0.09	0.21
	Mass Mean Diameter (µm)	1.00	2.50	6.00	10.00	30.00
	Density (g/cm^3) (Propane Combustion)	1.24	1.24	1.24	1.24	1.24
	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--

Source Category	Parameter	PM				
		Bin 1	Bin 2	Bin 3	Bin 4	Bin5
Lime Loading and Unloading (Quick, Pebble)	Mass Fraction	0.05	0.29	0.66	--	--
	Mass Mean Diameter	2.50	10.00	30.00	--	--
	Density (g/cm^3) (Quick)	0.44	0.44	0.44	--	--
	Density (g/cm^3) (Pebble)	0.96	0.96	0.96	--	--
Lime Unloading (Quick, Pebble)	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction	0.09	0.49	0.42	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3) (Quick)	0.44	0.44	0.44	--	--
	Density (g/cm^3) (Pebble)	0.96	0.96	0.96	--	--
Cement and Aggregate Loading and Unloading	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction	0.05	0.29	0.66	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3) (Cement)	1.44	1.44	1.44	--	--
	Density (g/cm^3) (Aggregate)	1.28	1.28	1.28	--	--
Prill Loading and Unloading	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction	0.05	0.30	0.65	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3) (Prill)	0.84	0.84	0.84	--	--
Refining Processes	Bin Upper Diameter (µm)	1.00	2.50	6.00	10.00	30.00
	Mass Fraction	0.72	0.10	0.07	0.03	0.08
	Mass Mean Diameter (µm)	1.00	2.50	6.00	10.00	30.00
	Density (g/cm^3) (Diesel Combustion)	1.00	1.00	1.00	1.00	1.00
Portable Crushing and Screening Plant	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction	0.05	0.32	0.63	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3) (DR average of YP, HF, WE)	2.46	2.46	2.46	--	--
Lime Kiln and Ball Mill	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction (Kiln)	0.27	0.28	0.45	--	--
	Mass Fraction (Ball Mill)	0.30	0.54	0.16	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3)	1.09	1.09	1.09	--	--
Blasting and Drilling	Bin Upper Diameter (µm)	2.50	10.00	30.00	--	--
	Mass Fraction	0.03	0.49	0.48	--	--
	Mass Mean Diameter (µm)	2.50	10.00	30.00	--	--
	Density (g/cm^3) (Ore or DR)	Pit-specific, see Table 5				
Dozing	Bin Upper Diameter (µm)	2.50	10.00	15.00	30.00	--
	Mass Fraction	0.11	0.08	0.06	0.75	--
	Mass Mean Diameter (µm)	2.50	10.00	15.00	30.00	--
	Density (g/cm^3) (Waste)	Pit-specific, see Table 5				

Table 5. Pit-Specific Ore and DR Densities for Deposition

Pit	Material	Density (g/cm^3)
YP	Ore	2.59
BT	Ore	2.00
HF	Ore	2.59
WE	Ore	2.68
YP	DR	2.48
BT	DR	2.00
HF	DR	2.34
WE	DR	2.57
Average (YP, HF, WE)	DR	2.46

3.4.2 Modeling for Non-Carcinogenic TAPs

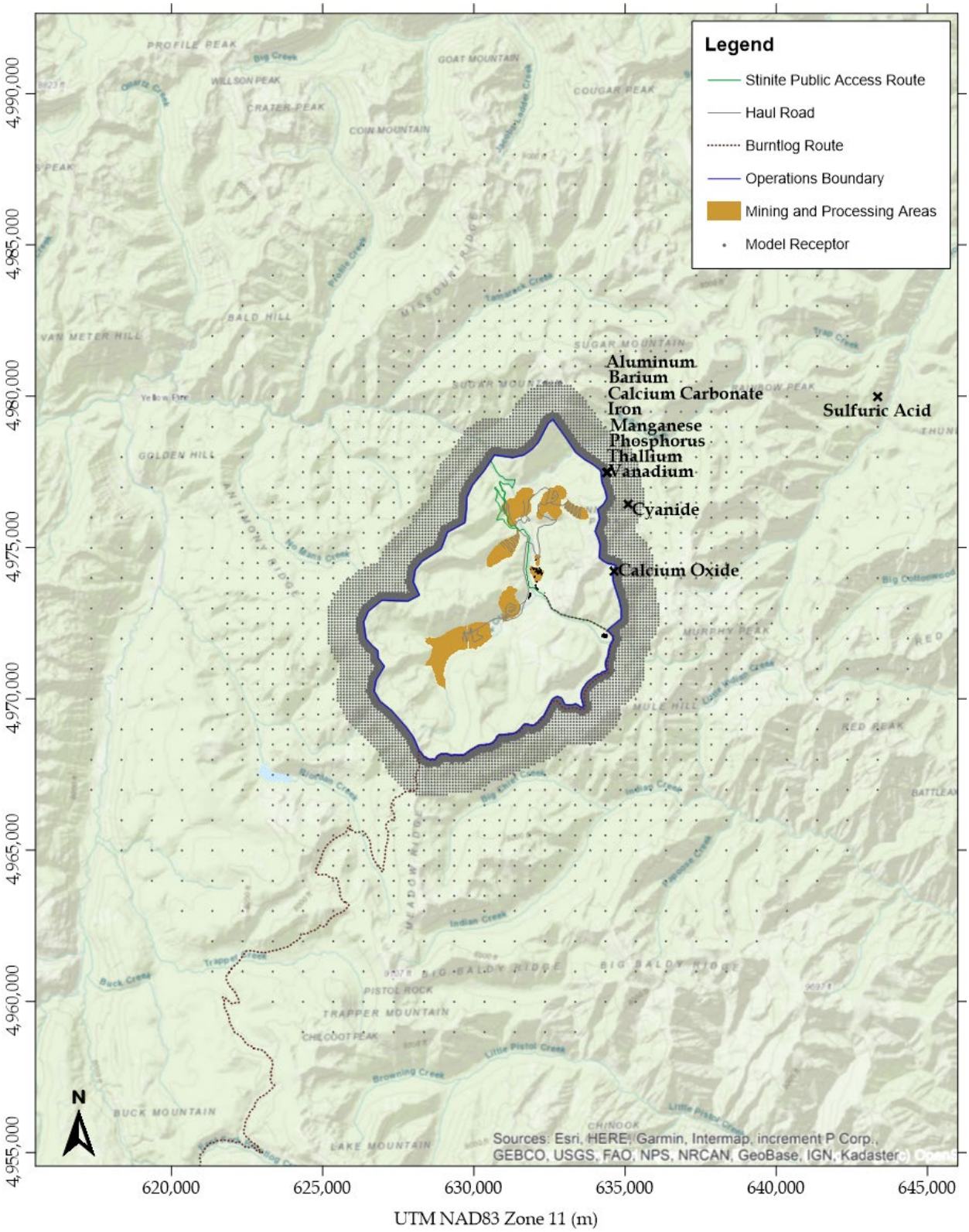
The non-carcinogenic TAPs subject to the AACs per IDAPA 58.01.01.585 were modeled at the emission levels shown in Table 3 above. The maximum 24-hour modeled concentration for each of the 14 modeling scenarios demonstrates compliance with the applicable AAC, as summarized in Table 6.

Table 6. Compliance Demonstration for Non-Carcinogenic TAPs

CAS	TAP Name	Highest Model Scenario	SGP Maximum 24-hr Concentration (μg/m³)	AAC (μg/m³)	TAP Compliance
7429-90-5	Aluminum	W5	6.17	500	Yes
7440-39-3	Barium	W5	0.07	25	Yes
1317-65-3	Calcium Carbonate	W5	1.22	500	Yes
1305-78-8	Calcium Oxide	ALL	0.15	100	Yes
592-01-8	Cyanide	ALL	0.20	250	Yes
7439-89-6	Iron	W5	1.58	50	Yes
7439-96-5	Manganese	W5	0.03	250	Yes
7723-14-0	Phosphorus	W5	0.06	5	Yes
7664-93-9	Sulfuric Acid	ALL	0.41	50	Yes
7440-28-0	Thallium	W5	0.001	5	Yes
7440-62-2	Vanadium	W5	0.002	2.5	Yes

The modeled emissions for each modeling scenario and source are provided in Appendix B. The modeled concentration per modeling scenario is provided in Appendix C. The predicted locations of the maximum concentrations for each non-carcinogenic TAP are presented in Figure 1.

Figure 1. Non-Carcinogenic Maximum TAP Concentration (µg/m³) Locations



3.4.3 Modeling Carcinogenic TAPs

The carcinogenic TAPs subject to the acceptable ambient concentrations for carcinogens (AACC) per IDAPA 58.01.01.586 were modeled using an emission inventory that includes the following T-RACT controls, long-term mining production limits, and other emission inventory refinements, as described below:

- Installing and operating dust collection systems on drilling rigs (T-RACT)
- Capping the haul roads that are outside of the pits and development rock storage facilities (DRSFs) with clean development rock (T-RACT)
- Limiting long-term mining production to 135,000 T/day (5-year rolling total)
- Constructing the Burntlog access road with offsite materials containing background level arsenic concentrations
- Updating the bulldozing emission factor using the SGP site-specific silt content.

The above emission inventory reductions are discussed in more detail in Section 5.0. The T-RACT analysis is provided in Section 6.0. A comparison of the 180,000 T/day TAP emissions shown in Table 3 and the T-RACT TAP emissions is shown in Table 7.

Table 7. Comparison of 180,000 T/day and T-RACT Emissions

CAS	TAP Name	Carcinogenic	180,000 T/day Emissions (lb/hr) [1]	T-RACT Emissions (lb/hr) [2]
7440-38-2	Arsenic	Yes	0.544	0.232
7440-41-7	Beryllium	Yes	0.00261	0.00185
7440-43-9	Cadmium	Yes	0.000435	0.000317
50-00-0	Formaldehyde	Yes	0.00189	0.00189
7440-02-0	Nickel	Yes	0.00169	0.00121

[1] Model Scenario W3 emissions from Table 3
[2] T-RACT emission levels for the demonstration of carcinogenic TAP compliance. See Table A-W3, T-RACT Emissions in Appendix A, pp. A-45 to A-49.

The maximum modeled concentration for each of the 14 modeling scenarios demonstrated compliance with the applicable AACC, as summarized in Table 8. The AACCs listed in Table 8 were increased by a factor of ten (10) per IDAPA 58.01.01.210.12(b); T-RACT adjustment. The SGP maximum concentrations were adjusted to account for the life-of-mine (LOM) production limits, which affect the lifetime exposure, and to account for the elimination of Modeling Scenario W5. See Sections 3.4.4 and 3.4.5 for more detail.

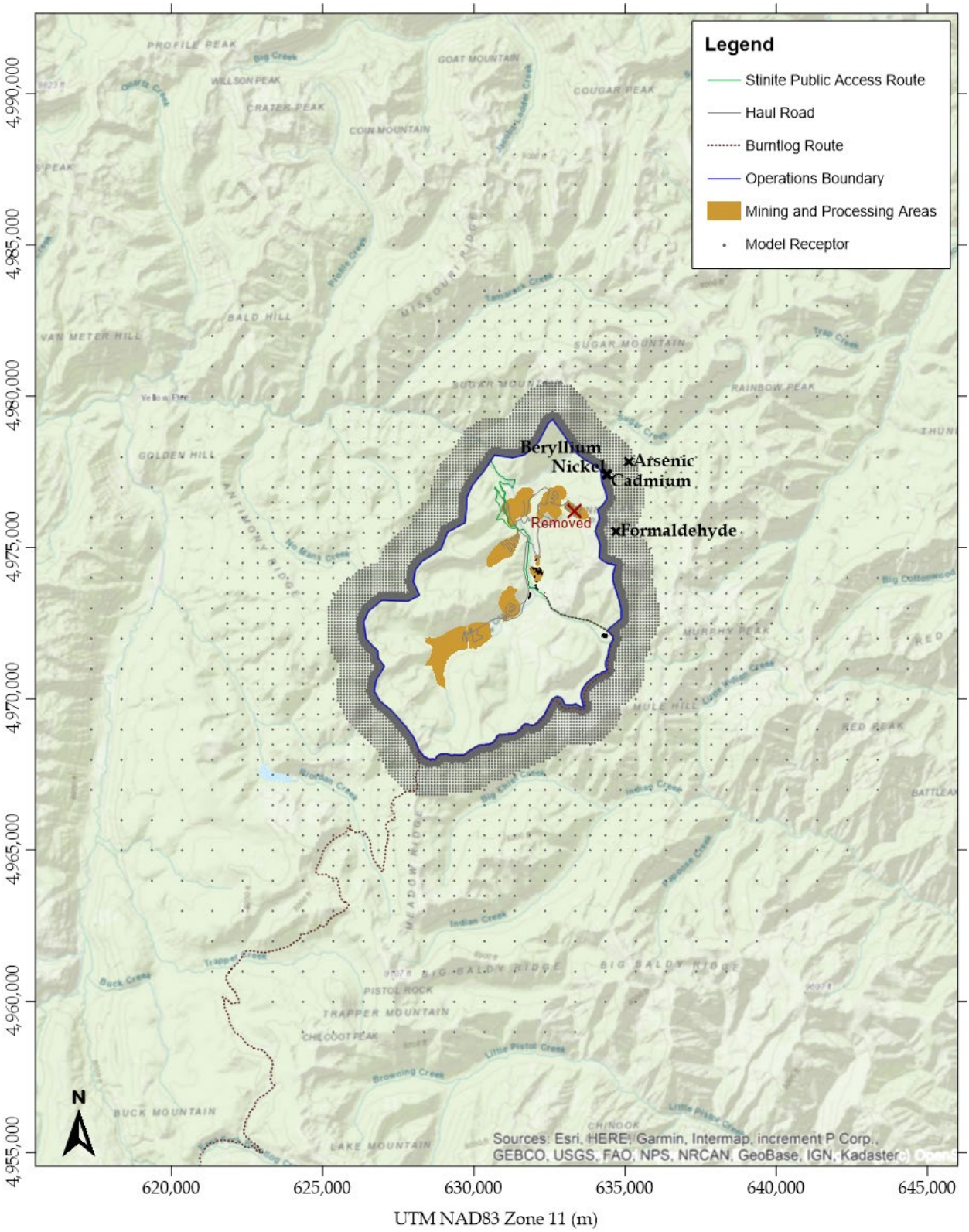
Table 8. Compliance Demonstration for Carcinogenic TAPs

CAS	TAP Name	Model Scenario	SGP Maximum Lifetime Exposure Concentration (μg/m³) [1]	AACC (μg/m³) [2]	TAP Compliance
7440-38-2	Arsenic	W2	0.00095	0.0023	Yes
7440-41-7	Beryllium	W1	0.00001	0.042	Yes
7440-43-9	Cadmium	W1	0.000002	0.0056	Yes
50-00-0	Formaldehyde	ALL	0.00007	0.77	Yes
7440-02-0	Nickel	W1	0.00001	0.42	Yes

[1] The lifetime exposure concentrations are based on the proposed restrictions discussed in Sections 3.4.4 and 3.4.5.
[2] The AACCs are increased by a factor of ten per IDAPA 58.01.01.210.12(b); T-RACT adjustment.

The modeled emissions for each modeling scenario and source are provided in Appendix B. The modeled concentration per modeling scenario is provided in Appendix C. The locations of the maximum concentrations for each carcinogenic TAP are presented in Figure 2.

Figure 2. Carcinogenic Maximum TAP Concentration (µg/m³) Locations



3.4.4 Carcinogenic TAP Modeling Lifetime Exposure Adjustment

The AACCs provided in IDAPA 58.01.01.586 were developed *based on the probability of developing excess cancers over a seventy (70) year lifetime exposure to one (1) microgram per cubic meter (1 ug/m3) of a given carcinogen and expressed in terms of a screening emission level or an acceptable ambient concentration for a carcinogenic toxic air pollutant* (IDAPA 58.01.01.006.125). Therefore, the highest modeled annual carcinogenic TAP concentration from each of the 14 modeling scenarios was evaluated for lifetime exposure as follows:

$$Lifetime\ expsoure\ \left(\frac{\mu g}{m^3}\right) = \frac{Highest\ annual\ concentration\ \left(\frac{\mu g}{m^3}\right) \times 16\ (mine\ operation\ years)}{70\ (years, lifetime\ exposure)}$$

This equation conservatively assumes that the highest annual concentration from the 14 modeling scenarios is repeated for 16 years of mining operation. This is then averaged over 70 years to calculate the 70-year lifetime exposure.

Calculating lifetime exposure based on 16 years of mining operation is also conservative. The annual emissions for carcinogenic TAP modeling are based on 135,000 T/day (see Section 3.4.3) and 365 days per year. Over 16 years, this equates to a potential mining production of 788.4 million tons:

$$\frac{135{,}000\left(\frac{ton}{day}\right) \times 365\left(\frac{day}{year}\right) \times 16\ years}{1{,}000{,}000\left(\frac{ton}{million\ ton}\right)} = 788.4\ million\ tons$$

The actual LOM total production as described in the SGP Refined Proposed Action (ModPRO2) mine plan is only 402.86 million tons (Perpetua 2021a), which is 51.1% of the potential LOM production represented in the above equation and related emissions evaluations.

3.4.5 Arsenic Compliance Demonstration for Modeling Scenarios W1–W5

To demonstrate compliance with the AACC for arsenic, two addition operating limitations were applied:

- The removal of Modeling Scenario W5 as a potential operating scenario
- Limiting the West End pit's LOM potential mining production to 50% of the total LOM potential mining production of 788.4 million tons: 50% * 788.4 = 394.2 million tons

Perpetua Resources has determined that the West End DRSF will not be constructed. This change eliminated Modeling Scenario W5 from the arsenic modeling evaluation. The remaining four West End pit modeling scenarios (W1–W4) are evaluated using the 70-year lifetime exposure equation from Section 3.4.4 and adjusting for the proposed West End pit LOM production limit of 50% of the total production as follows:

$$lifetime\ expsoure\ \left(\frac{\mu g}{m^3}\right) = \left(\frac{\left[Wi\left(\frac{\mu g}{m^3}\right)(50\%) + nonW\left(\frac{\mu g}{m^3}\right)(50\%)\right] \times 16\ (mine\ operation\ years)}{70\ (years, lifetime\ exposure)}\right)$$

Where:

$Wi = the\ modeled\ annual\ arsenic\ concentration\ from\ Scenario\ Wi;\ i = 1\ to\ 4$

$nonW = the\ modeled\ annual\ arsenic\ concentration\ of\ the\ highest\ nonW\ scenario;$

B1, B2, H1, H2, H3, H4, Y1, Y2, or Y3

The above equation was used to calculate the lifetime arsenic exposure from the West End pit scenarios (W1–W4) on a receptor-by-receptor basis. Combining the concentrations from Modeling Scenarios W1–W4 with the highest concentration from the remaining non-West End pit scenarios (B1, B2, H1, H2, H3, H4, Y1, Y2, or Y3) ensures that the maximum concentration is evaluated.

Calculating lifetime arsenic exposure based on the proposed West End pit LOM production limit of 50% of the total production is conservative. The actual LOM total production from the West End pit as described in the ModPRO2 mine plan is only 198.26 million tons (Perpetua 2021a), which is 50.3% of the proposed West End pit LOM production limit of 394.2 million tons.

4.0 COMPARISON OF ACTUAL ARSENIC MODELING TO POTENTIAL ARSENIC MODELING

Additional analyses of arsenic emissions were prompted by public comments on the draft PTC. IDEQ requested that Perpetua Resources conduct an arsenic modeling analysis based on the actual mining operation and production described in the ModPRO2 mine plan. Those modeling results were submitted to IDEQ in a report on July 8, 2021, titled "Stibnite Gold Project Permit to Construct Application Arsenic Modeling Addendum" (Air Sciences 2021).

While that report provided an assessment of the actual arsenic concentrations expected from the actual mining operation and production over the life of the SGP ("actual analysis"), the analysis described in Section 3.0 above is based on potential operating scenarios ("potential analysis"). These analyses ensure that public health is protected under all operating conditions.

A comparison between the actual analysis and the potential analysis for the lifetime exposure of arsenic is summarized in Table 9.

Table 9. Actual Analysis vs. Potential Analysis for Arsenic Lifetime Exposure

Model Parameter	Actual Data	Potential Data	Actual Data Basis	Potential Data Basis
Process emissions (lb/hr)	0.004514	0.004514	Equipment design rate	Equipment design rate
Mining emissions (lb/hr); varies	Max: 0.0854 Min: 0.0058 Avg: 0.0451	Max: 0.232 Min: 0.061	ModPRO2 – 16 years of operation	14 potential worst-case scenarios
Emissions included in modeling (lb/yr)	100%	98%	Actual analysis of all emissions	Includes IDAPA 58.01.01.210.20
LOM production (million tons)	402.86	788.4	ModPRO2	135,000 ton/day * 365 day/yr * 16 years
Lifetime exposure modeling	Average concentration over 16 years of operation	Highest scenario concentration assumed for 16 years	Actual analysis	Potential worst-case analysis
Maximum modeled concentration ($\mu g/m^3$)	0.00015	0.00095	Actual analysis	Potential worst-case analysis
Applicable AACC ($\mu g/m^3$)	0.0023	0.0023	IDAPA 58.01.01. 210.12(b) and .586	IDAPA 58.01.01. 210.12(b) and .586

A brief discussion of Table 9 is provided below:

- AACC Results: In both the actual and potential analyses, the maximum modeled arsenic concentrations are below the AACC, demonstrating compliance with IDAPA 58.01.01.210.

- Process emissions: The process arsenic emissions in both analyses are identical. This is because both emission inventories were based on the maximum design rates of the process equipment.

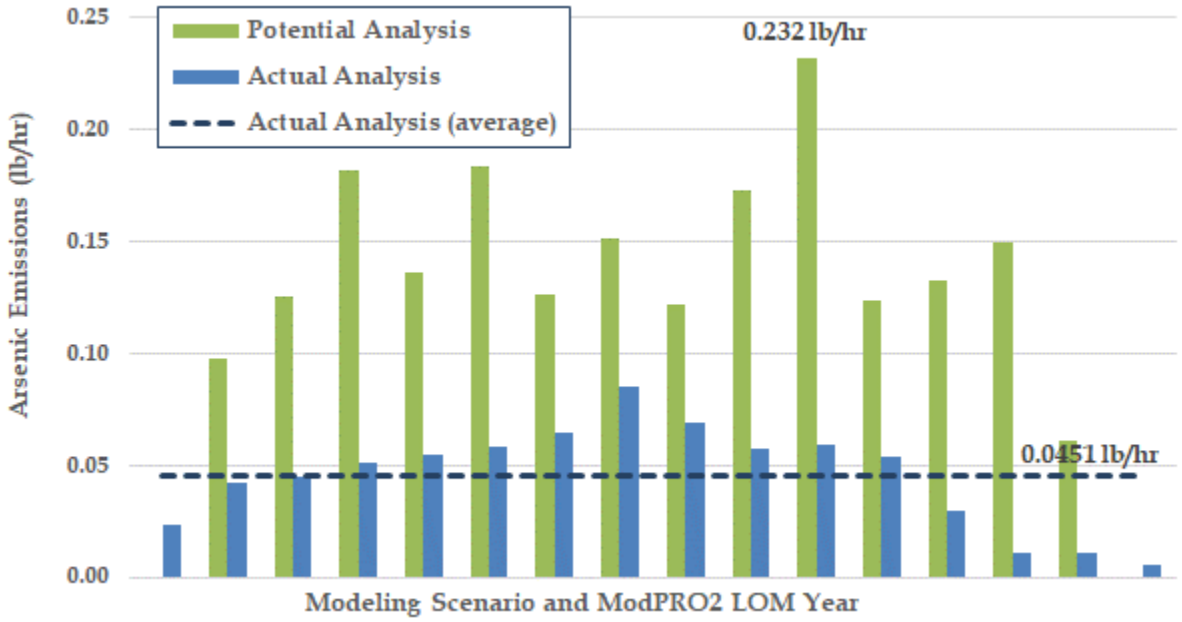
- Mining emissions: The arsenic emissions in the actual analysis (0.0451 lb/hr average) are only 19% of the arsenic emissions in the potential analysis (0.232 lb/hr highest scenario). This is because the actual mining operation and production activities (e.g., drilling, blasting, material product, hauling miles, etc.) in ModPRO2 are far less than the potential mining (PTC) operating scenarios. Figure 3 compares the ModPRO2 arsenic emissions from mining for each year of operation (actual analysis) to the PTC arsenic emissions from mining for each worst-case operating scenario (potential analysis).

- In both analyses, all the arsenic emissions are included in the modeling, except emissions from covered or addressed sources, IDAPA 58.01.01210.20(a) and (b). See Section 3.1.

- The actual analysis LOM production of 402.86 million tons is 51.1% of the potential analysis production of 788.4 million tons.

- When modeling the lifetime arsenic exposure, the actual analysis is based on modeling each year of the ModPRO2 mine plan and then averaging the yearly results on a receptor-by-receptor basis. In addition to the lower actual arsenic emissions, the mining activity locations vary, which reduced the average arsenic concentration at any given location outside the operations boundary. In contrast, the potential analysis is based on higher (potential) emissions and the highest modeling scenario, which are assumed to occur for 16 consecutive years. This potential approach resulted in significantly higher and more conservative arsenic hot-spot concentrations.

Figure 3. Actual Arsenic Mining Emissions vs. Potential Arsenic Mining Emissions



The concentrations and maximum locations of the arsenic lifetime exposure (70 years) are presented in Figure 4 for the actual analysis and Figure 5 for the potential analysis. As shown in these figures, the maximum arsenic concentrations are below the applicable AACC per IDAPA 58.01.01.210.12(b) and 586.

Figure 4. Actual Arsenic Concentrations (µg/m³) and Maximum Location

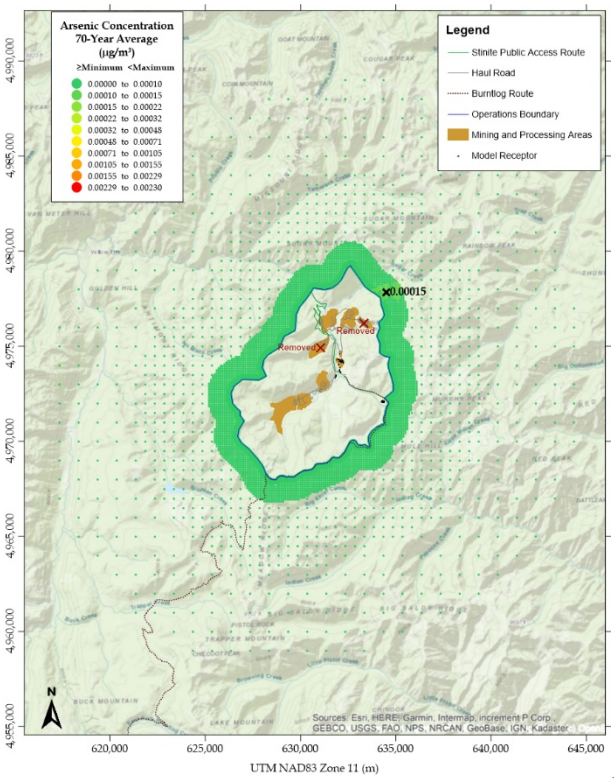
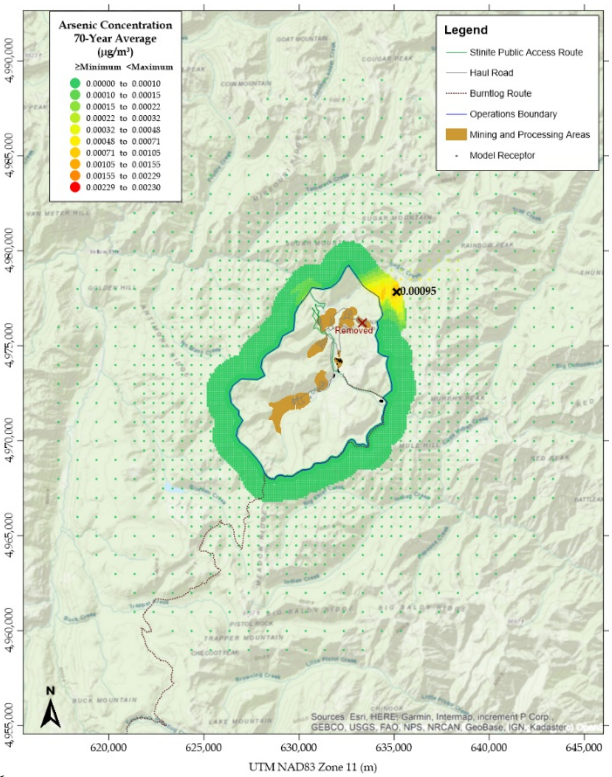


Figure 5. Potential Arsenic Concentrations (µg/m³) and Maximum Location



5.0 EMISSION INVENTORY FOR CARCINOGENIC TAPS

As discussed in Section 3.4.3, carcinogenic TAPs were modeled using an emission inventory adjusted for T-RACT controls, long-term mining production limits, and other refinements. These emission inventory changes are described in the following sections. The detailed emission calculations for the T-RACT emission inventory are provided in Appendix A (HAP/TAP Emission Calculations – Scenario W3, T-RACT Emissions).[8] The changes to these emission inventory inputs are highlighted on page A-41 of Appendix A.

5.1 Drilling Dust Control System

To reduce dust-related metal TAP emissions from drilling, Perpetua Resources will install and operate drilling rigs mounted with dust collection systems. *These systems have the ability to operate in various climates, i.e., they are not subject to freezing at lower temperatures as with the use of water, and they can be up to 99 percent efficient if properly maintained* (CDC 2012). The arsenic emissions inventory in Appendix A conservatively assumes a dust control efficiency of 90% for these systems.

5.2 Haul Road Capping

To reduce dust-related arsenic emissions from haul roads, Perpetua Resources will cap the haul roads that are outside of the pits and DRSFs with clean (low arsenic) development rock. Haul roads within the pits and DRSFs cannot be capped with this material because of steep grades and periodic road rerouting as mining areas develop. The median arsenic concentration of the clean development rock is 90 parts per million (ppm) (Perpetua 2021g).

5.3 Long-Term Mining Production Limits

To limit long-term dust-related metal TAP emissions, Perpetua Resources proposes limiting mining production to 135,000 T/day based on a 5-year rolling averaging period. This long-term mining production limit will be in addition to the current short-term daily limit of 180,000 T/day.

Limiting the long-term mining production limit to 135,000 T/day (5-year rolling average) is conservative. The highest 5-year rolling average mining production rate as described in ModPRO2 is only 95,700 T/day (Perpetua 2021a), which is 70.9% of the proposed limit.

[8] HAP/TAP Emission Calculations – Scenario W3, T-RACT: The HAP and TAP emissions based on T-RACT controls, a long-term mining production limit of 135,000 T/day (5-year rolling average), other refinements, and the highest emissions scenario (Modeling Scenario W3).

5.4 Burntlog Access Road Refinement

To reduce dust-related arsenic emissions from vehicle travel on the Burntlog access road, Perpetua Resources will construct this road with borrow material located outside of the mine site ambient air boundary. Analyses of the borrow sites show low arsenic levels of 2.5 ppm (ALS 2018), which are consistent with the background soil levels (DHHS 2007).

5.5 Bulldozing Refinement

Perpetua Resources and Air Sciences conducted a thorough review of the SGP emissions inventory to identify any potential dust-related metal TAP emission control measures (as discussed in the previous sections) and emission factor refinements. The only emission factor refinement identified was changing the bulldozing emission factor silt content from the EPA default of 6.9% to the SGP site-specific silt content of 4.0% (Midas Gold 2015). EPA recommends the use of site-specific data when available.[9]

[9] *In using the equations to estimate emissions from sources found in a specific western surface mine, it is necessary that reliable values for correction parameters be determined for the specific sources of interest if the assigned quality ratings of the equations are to be applicable. For example, actual silt content of coal or overburden measured at a facility should be used instead of estimated values. In the event that site-specific values for correction parameters cannot be obtained, the appropriate geometric mean values from Table 11.9-3 may be used, but the assigned quality rating of each emission factor equation should be reduced by 1 level (e.g., A to B)* (EPA 1998).

6.0 T-RACT ANALYSIS

Per IDAPA 58.01.01.210.14(a), this section documents the T-RACT control technologies.

6.1 Drilling Dust Control System

As discussed in Section 5.1, Perpetua Resources will install and operate drilling rigs mounted with dust collection systems. The following paragraphs evaluate this control as T-RACT:

Identification of all possible control technologies

Drilling operations create dust-related metal TAP emissions. The possible control technologies for these emissions are as follows:

- Applying best management practices
- Wet drilling with water injection
- Dry drilling with dust collectors

Best management practices include: (1) avoiding drilling operations during high dust conditions, and (2) shrouding drill areas to limit dust emissions.

Wet drilling includes injected water flows through the center of the drill and out though the drill bit to reduce dust emissions by 96% to 98%.[10]

Dry drilling includes rigs equipped with dust collection systems that shroud dust generated from the drilling area, capture, and remove dust through a dust collection system composed of an exhaust fan and filters that can achieve up to 99% control efficiency (CDC 2012).

Elimination of technologically infeasible or unreasonable technologies

Wet drilling at the SGP has the following disadvantages:

- It is subject to freezing at the low temperatures expected for the SGP location.
- It can result in drill bit plugging, drill rotation binding, and drill bit degradation.
- A wet drill hole can interfere with the blasting agent.

Based on the above disadvantages of wet drilling, it is considered an infeasible or unreasonable technology for the SGP.

[10] *Testing has demonstrated that dust control efficiencies of up to 98 percent can be obtained using the water separator sub while dust control efficiencies of wet drilling without the water separator sub were 96 percent* (CDC 2012).

Ranking the remaining technologies by control effectiveness

The ranking of the possible control technologies for drilling by control effectiveness is as follows (highest to lowest):

1. Dry drilling with dust collectors – up to 99% control efficiency
2. Best management practices

Evaluation of the most effective control technology and selection of T-RACT

Perpetua Resources selects the top (most effective) control technology of dry drilling with dust collectors as T-RACT. Selecting the top control negates the need for considering economic, energy, and environmental impacts regarding the other control technologies.

6.2 Haul Road Dust and Arsenic Control

Dust emissions from unpaved roads are caused by vehicle traffic on these roads. Particles are lifted and dropped from the rolling wheels, and the turbulent wake behind the vehicles causes these particulates to become air borne. Dust control options include surface improvement (paving) or surface treatment (chemical suppressant application or watering).

As discussed in the SOB from February 18, 2021, Perpetua Resources will control dust emissions from haul roads by treating the surface with frequent watering and the periodic application of a chemical suppressant. Reducing dust emissions reduces dust-related metal TAP emissions. In addition, Perpetua Resources will reduce arsenic emissions by capping the haul roads outside of the pits and DRSFs with clean (low arsenic) development rock, as discussed in Section 5.2. The following sections evaluate these control measures as T-RACT.

6.2.1 Dust Control Technologies

Identification of all possible control technologies

Vehicle traffic on unpaved haul roads creates dust-related metal TAP emissions. The possible control technologies for these emissions are as follows:

- Paving
- Application of a chemical dust suppressant
- Watering

Paving: *The control efficiencies achievable by paving can be estimated by comparing emission factors for unpaved and paved road conditions* (EPA 2006). The particulate emission factor for a paved road with a silt loading of 0.2 g/m^2 (based on the EPA default value for the SGP average daily traffic of 500–5,000 trips per day) (EPA 2011a) and the SGP average vehicle weight of 182.6 tons is

0.515 lb/VMT. The SGP unpaved road particulate emission factor is 14.43 lb/VMT (uncontrolled). Based on these emission factors, the estimated control efficiency of paving the haul roads is 96%.

Dust suppressant and watering: The SGP dust emissions from unpaved haul roads are calculated based on a surface treatment control efficiency of 90% (annual basis) for the application of a chemical dust suppressant supplemented with frequent watering. As discussed in the SGP Application, this control efficiency is supported by EPA's AP-42 13.2.2 referenced test reports, which show that a chemical dust suppressant alone can achieve 90% to 99% control efficiency and 98% for magnesium chloride in particular (Air Sciences 2020, Appendix A to Attachment A). A control efficiency of 90% is also supported by the control efficiency limits established under Reasonable Achievable Control Technology (RACT), Best Available Control Technology (BACT), and Lowest Achievable Emission Rate (LAER) determinations under EPA's New Source Review permitting program.

The EPA RACT/BACT/LAER Clearinghouse (RBLC) database contains case-specific information on the air pollution technologies required by major stationary sources seeking a permit under EPA's New Source Review (NSR) program. This database was queried for all listings of air pollution technologies for unpaved roads using chemical dust suppressants or a combination of chemical dust suppressants and watering. The results of the query identified 10 projects containing a control efficiency of 90% or greater for unpaved roads. These determinations are listed in Table 10.

Table 10. EPA RBLC Determinations for 90% or Greater Control Efficiency of Unpaved Roads

State	Facility Name	RBLC-ID	Dust Control	Dust Control Efficiency
AK	Donlin Gold Project	AK-0084	water/chem	90%
AR	Turk Power Plant	AR-0094	water/chem	90%
CO	Rio Grande Portland Cement Corp.	CO-0043	water/chem	90%
IN	Nucor Steel	IN-0034	chem	90%
LA	Nucor Steel Louisiana	LA-0239	water/chem	90%
MO	Lafarge Corp.	MO-0048	chem	90%
NV	Sloan Quarry	NV-0045	chem	98%
NV	Nellis Air Force Base	NV-0047	water/chem	90%
OH	Unlimited Concrete	OH-0126	water/chem	90%
OH	Unlimited Concrete	OH-0131	water/chem	90%

(EPA 2021)

Elimination of technologically infeasible or unreasonable technologies

Paving haul roads at the SGP has the following disadvantages:

- The paving of haul roads is not conventional practice at mining operations.
- Paved highway weight limits are only approximately 20,000 pounds (10 tons).
- Paving is costly.

The conventional practice for mining operations is to utilize unpaved haul roads with treated surfaces to control fugitive dust. Haul trucks are single axle vehicles with a gross loaded weight of 60 tons to 685 tons. The loaded weight range for the SGP haul trucks is 60 to 260 tons. These weights significantly exceed regulatory weight limits for paved highways of 10 tons. Furthermore, the SGP mining activity locations move as mining progresses. This requires haul roads to be rerouted as necessary. Due to the temporary nature of hauling routes and the heavy weight of haul trucks, paving is considered an infeasible or unreasonable technology for the SGP.

Ranking the remaining technologies by control effectiveness

The ranking of the possible control technologies for drilling by control effectiveness is as follows (highest to lowest):

1. Application of a chemical dust suppressant – 90% to 99% control efficiency

2. Watering – 75% to 95% control efficiency (EPA 2006, Figure 13.2.2-2)

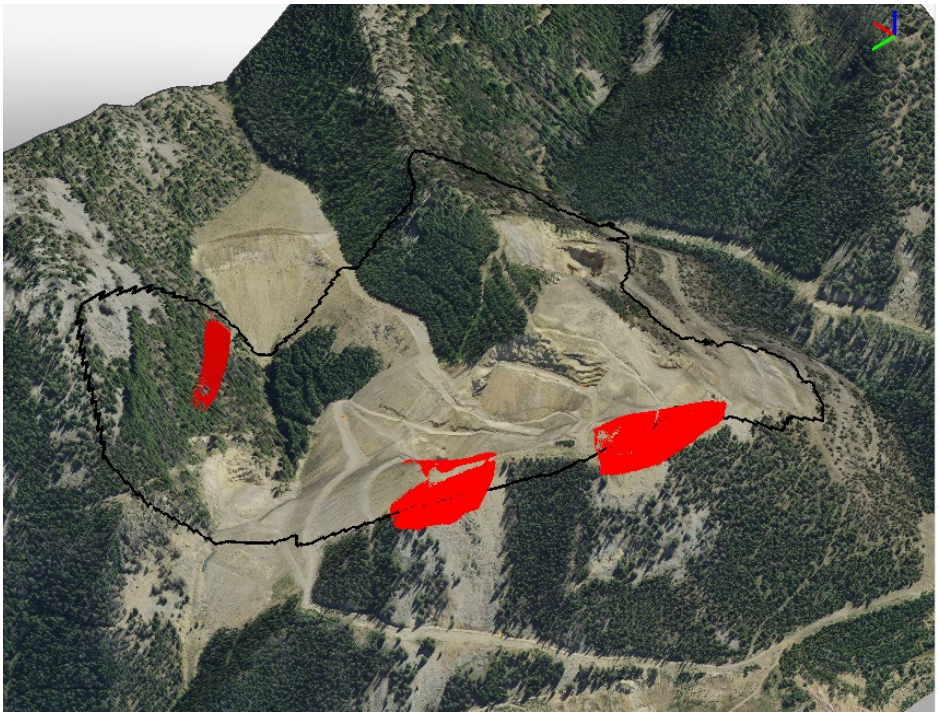
Evaluation of the most effective control technology and selection of T-RACT

After eliminating paving as a viable control option, Perpetua Resources selects the next most effective control technologies of the application of a chemical dust suppressant supplemented with frequent watering as T-RACT.

6.2.2 Arsenic Control Technologies

After applying T-RACT for dust control, as discussed in Section 6.2.1, dust-related arsenic emissions can only be further reduced by capping the haul roads with clean (low-arsenic) development rock. The median arsenic concentration of the SPG onsite material is 667 ppm (Midas Gold 2017c). However, there are quartzite rock deposits at the West End pit that have significantly lower mineralization and, thus, lower arsenic levels. The median arsenic concentration of this quartzite rock is 90 ppm (Perpetua 2021g), and there is approximately 3 million tons of this material available. Figure 6 shows the locations of the quartzite rock deposits.

Figure 6. Quartzite Rock Areas



Perpetua Resources proposes capping the haul roads that are outside of the pits and DRSFs with clean (low-arsenic) development rock as a T-RACT work practice, in addition to the T-RACT dust control measures discussed in Section 6.2.1. Haul roads within the pits and DRSFs cannot be capped with this material because of steep grades and periodic road rerouting as mining areas develop.

7.0 PROPOSED PERMIT CONDITIONS FOR CARCINOGENIC TAP COMPLIANCE

IDEQ is required to establish limits and standards as part of the permit to construct to ensure compliance with the TAP provisions in accordance with IDAPA 58.01.01.210.12(d) and 14(e). Per these two rules, Perpetua Resources proposes the following permit conditions:

7.1 Conditions per IDAPA 58.01.01.210.12(d)

Per IDAPA 58.01.01.210.12(d), *[t]he Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration*. As discussed in Section 5.2, Perpetua Resources is proposing long-term mining production limits to demonstrate compliance with carcinogenic TAPs. The following are proposed permit conditions to address this TAP provision:

- The permittee shall haul no more than 135,000 tons per day (T/day) of ore and rock, based on a 5-year rolling average.
    - Each year, the permittee shall monitor and record the amount of ore and rock transported on haul trucks in tons per year (T/yr), and calculate the 5-year rolling average (T/day) based on 365 days per year.
- The permittee shall haul no more than 788.4 million tons (MT) of ore and rock from all deposits over the life of the mine.
- The permittee shall haul no more than 394.2 MT of ore and rock from the West End deposit over the life of the mine.
    - Each year, the permittee shall monitor and record the amount of ore and rock transported on haul trucks (T/yr) from all deposits and the amount of ore and rock transported on haul trucks (T/yr) from the West End deposit, and calculate the life-of-mine rolling total (MT) for each.

7.2 Conditions per IDAPA 58.01.01.210.14(e)

Per IDAPA 58.01.01.210.14(e), *[i]f the Department determines that the applicant has proposed T-RACT, the Department shall determine which of the options, or combination of options, will result in the lowest emission of toxic air pollutants, develop the emission standards constituting T-RACT and incorporate the emission standards into the permit to construct.* As discussed in Section 6.2, Perpetua Resources is proposing T-RACT controls to demonstrate compliance with carcinogenic TAPs. The following are proposed permit conditions to address this TAP provision:

- The permittee shall use drilling rigs equipped with dust collection systems. Control efficiency: 90%.
    - Within 60 days after startup, the permittee shall develop and maintain an Operation and Maintenance (O&M) manual. The O&M manual shall be a permittee-developed document based upon, but independent from, manufacturer-supplied operating manuals. The permittee shall operate the dust collection systems in accordance with the O&M manual at all times. The requirements in the O&M manual shall be incorporated by reference to this permit and shall be enforceable permit conditions. The O&M manual shall be submitted to DEQ within 60 days after initial startup.
- The permittee shall cap haul roads that are outside of the pits and DRSFs with low-arsenic material.
    - The permittee shall develop and maintain a plan that:
        - identifies the low-arsenic quartzite rock deposits in the West End pit based on core sample analyses,
        - requires periodic inspections (at least quarterly) of the capped haul roads and recapping as needed, and
        - includes record keeping of the inspections and any recapping of roads, noting the date and road section.
    - The permittee shall use the low-arsenic quartzite rock deposits from the West End pit, or other material with equal or lower arsenic concentration, as capping material.
        - If other material is used, it must be analyzed for arsenic concentration and a record of the median arsenic concentration shall be maintained.

The Draft PTC currently includes conditions for treating haul road surfaces with a chemical suppressant and water to control 90% of the dust (on an annual basis). See Conditions 1.2, 2.1–2.6, 2.8, 3.2, and 3.9. Therefore, no new conditions are needed or proposed for this dust control practice.

8.0 MERCURY EMISSIONS ANALYSIS

A complete inventory of mercury emissions is provided in Appendix A, as discussed in Section 2.0. This section categorizes these emissions into mercury emissions covered or not covered by IDAPA 58.01.01.215. According to IDAPA 58.01.01.215:

No owner or operator may commence construction or modification of a stationary source or facility that results in an increase in annual potential emissions of mercury of twenty-five (25) pounds or more unless the owner or operator has obtained a permit to construct under Sections 200 through 228 of these rules. The permit to construct application shall include an MBACT analysis for the new source or sources for review and approval by the Department. A determination of applicability under Section 215 shall be based upon the best available information. Fugitive emissions shall not be included in a determination of applicability under Section 215.

01. Exemptions. New or modified stationary sources within a source category subject to 40 CFR Part 63 are exempt from the requirements of Section 215.

Table 11 summarizes the SGP mercury sources and potential emissions for the highest emissions year (Model Scenario W3, 180,000 T/day Emissions). This table also provides the mercury emissions without considering the above exemptions, the exemption criteria, and the non-exempt mercury emissions for each source. As shown in this table, under IDAPA 58.01.01.215.01, the total potential non-exempt mercury emissions are 5.40E-5 ton/yr (0.108 lb/yr), which is well below the 25 lb/yr emission threshold.

Table 11. Mercury Source and Emissions Summary

Source	All Emissions ton/yr	Fugitive/ NESHAP Exemption	Non-Exempt Emissions ton/yr
Mining			
Fugitive Dust (drilling, blasting, excavating, hauling, etc.)	0.0021	Fugitive	0
Fugitive Evaporative (pits, tailings, DRSFs, stockpiles)	0.0036	Fugitive	0
Ore Processing			
Crushing, Screening, and Transfers	2.47E-05		2.47E-05
Prill Silos	0		0
Ore Concentration and Refining			
Autoclave	0.00010	7E	0
EW, Pregnant Tank, Retort, Furnace, Carbon Kiln	0.0017	7E	0
Process Heating			
POX, Carbon Kiln, Propane Vaporizers, Solution Heater	8.28E-06		8.28E-06
Lime Production			
Lime Kiln Combustion	2.09E-05	5A	0
Limestone Crushers, Screens, Mill, and Transfers	3.86E-07		3.86E-07
Lime Kiln, Kiln Feed, Lime Mill, and Pebble Lime Silo	0.0010	5A	0
Lime Silos and Lime Mill Crushing	4.05E-09		4.05E-09
Aggregate Production			
Portable Crushers, Screens, and Transfers	1.10E-07		1.10E-07
Concrete Production			
Central Mixer	0		0
Cement Silo Loading and Unloading	0		0
Aggregate Bin	6.90E-08		6.90E-08
HVAC			
Heaters	2.04E-05		2.04E-05
Emergency Power			
Emergency Generators and Fire Pump	0	4Z	0
Fuel Storage			
Gasoline Fuel Tanks	0	6C	0
Total	**0.00863**		**5.40E-05**

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Appendix A – HAP/TAP Emission Calculations

Appendix A Table of Contents

Air Sciences Inc.	PROJECT TITLE: Stibnite Gold Project	BY: K. Lewis
	PROJECT NO: 335-20-3	PAGE: 1 OF: 19 SHEET: Calcs
AIR EMISSION CALCULATIONS	SUBJECT: HAP/TAP Emission Calculations	DATE: October 4, 2021

Model Scenario W3 180,000 T/day Emissions

Hazardous Air Pollutants (HAP)/Toxic Air Pollutants (TAP) Emissions Summary

		Emissions[1]									
		Fuel Combustion		Process/Prod/Leach		Mining		Total			
CAS	HAP/TAP	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	HAP	TAP
106-99-0	1,3-Butadiene	8.4E-07	3.7E-06	0	0	0	0	8.4E-07	3.7E-06	Y	Y
91-57-6	2-Methylnaphthalene	1.1E-06	4.6E-06	0	0	0	0	1.1E-06	4.6E-06	Y	N
56-49-5	3-Methylchloranthrene	7.8E-08	3.4E-07	0	0	0	0	7.8E-08	3.4E-07	Y	Y
57-97-6	7,12-Dimethylbenz(a)anthracene	7.6E-07	3.0E-06	0	0	0	0	7.6E-07	3.0E-06	Y	N
83-32-9	Acenaphthene	5.7E-06	7.1E-06	0	0	0	0	5.7E-06	7.1E-06	Y	N
208-96-8	Acenaphthylene	1.1E-05	1.4E-05	0	0	0	0	1.1E-05	1.4E-05	Y	N
75-07-0	Acetaldehyde	2.5E-05	1.1E-04	0	0	0	0	2.5E-05	1.1E-04	Y	Y
107-02-8	Acrolein	1.6E-05	2.0E-05	0	0	0	0	1.6E-05	2.0E-05	Y	Y
120-12-7	Anthracene	1.7E-06	2.4E-06	0	0	0	0	1.7E-06	2.4E-06	Y	N
7440-36-0	Antimony	0	0	5.7E-04	2.5E-03	1.9E-02	8.2E-02	1.9E-02	8.5E-02	Y	Y
7440-38-2	Arsenic	8.7E-06	3.8E-05	4.5E-03	2.0E-02	0.54	2.38	0.55	2.40	Y	Y
56-55-3	Benz(a)anthracene	3.1E-07	1.4E-06	0	0	0	0	3.1E-07	1.4E-06	Y	Y
71-43-2	Benzene	3.6E-04	1.6E-03	7.0E-03	3.1E-02	0	0	7.4E-03	3.2E-02	Y	Y
50-32-8	Benzo(a)pyrene	1.4E-07	6.1E-07	0	0	0	0	1.4E-07	6.1E-07	Y	Y
205-99-2	Benzo(b)fluoranthene	4.4E-07	1.9E-06	0	0	0	0	4.4E-07	1.9E-06	Y	Y
191-24-2	Benzo(g,h,i)perylene	7.5E-07	1.1E-06	0	0	0	0	7.5E-07	1.1E-06	Y	N
207-08-9	Benzo(k)fluoranthene	1.5E-07	6.6E-07	0	0	0	0	1.5E-07	6.6E-07	Y	Y
7440-41-7	Beryllium	5.2E-07	2.3E-06	4.3E-04	1.9E-03	2.6E-03	1.1E-02	3.0E-03	1.3E-02	Y	Y
92-52-4	Biphenyl	0	0	4.4E-05	1.9E-04	0	0	4.4E-05	1.9E-04	Y	Y
7440-43-9	Cadmium	4.8E-05	2.1E-04	4.1E-04	1.8E-03	4.1E-04	1.8E-03	8.7E-04	3.8E-03	Y	Y
75-15-0	Carbon Disulfide	0	0	1.4E-02	6.3E-02	0	0	1.4E-02	6.3E-02	Y	Y
7440-47-3	Chromium	6.6E-05	2.7E-04	6.1E-04	2.5E-03	7.3E-03	3.2E-02	8.0E-03	3.5E-02	Y	Y
18540-29-9	Cr (VI)	0	0	3.4E-07	1.5E-06	0	0	3.4E-07	1.5E-06	Y	Y
218-01-9	Chrysene	5.8E-07	2.5E-06	0	0	0	0	5.8E-07	2.5E-06	Y	Y
7440-48-4	Cobalt	4.0E-06	1.6E-05	4.7E-04	2.0E-03	3.3E-03	1.4E-02	3.7E-03	1.6E-02	Y	Y
592-01-8	Cyanide	0	0	0.45	1.99	0	0	0.45	1.99	Y	Y
53-70-3	Dibenzo(a,h)anthracene	1.8E-07	7.7E-07	0	0	0	0	1.8E-07	7.7E-07	Y	Y
106-46-7	Dichlorobenzene	5.7E-05	2.3E-04	0	0	0	0	5.7E-05	2.3E-04	Y	Y
206-44-0	Fluoranthene	5.5E-06	7.0E-06	0	0	0	0	5.5E-06	7.0E-06	Y	N
86-73-7	Fluorene	1.7E-05	2.1E-05	0	0	0	0	1.7E-05	2.1E-05	Y	N
50-00-0	Formaldehyde	3.3E-03	1.5E-02	0	0	0	0	3.3E-03	1.5E-02	Y	Y
110-54-3	Hexane	8.5E-02	0.34	3.1E-02	0.14	0	0	0.12	0.48	Y	Y
7647-01-0	Hydrogen Chloride	0	0	0.99	3.67	0	0	0.99	**3.67**	Y	Y
193-39-5	Indeno(1,2,3-cd)pyrene	2.2E-07	9.6E-07	0	0	0	0	2.2E-07	9.6E-07	Y	Y
7439-92-1	Lead	0	0	4.8E-04	2.1E-03	6.5E-03	2.9E-02	7.0E-03	3.1E-02	Y	N
7439-96-5	Manganese	1.8E-05	7.2E-05	4.6E-03	1.7E-02	0.24	1.07	0.25	1.08	Y	Y
7439-97-6	Mercury	1.2E-05	5.0E-05	6.9E-04	2.9E-03	1.3E-03	5.7E-03	2.0E-03	8.6E-03	Y	N
91-20-3	Naphthalene	1.9E-04	3.1E-04	1.9E-03	8.5E-03	0	0	2.1E-03	8.8E-03	Y	Y
7440-02-0	Nickel	9.1E-05	4.0E-04	4.6E-04	2.0E-03	1.6E-03	7.1E-03	2.2E-03	9.5E-03	Y	Y
85-01-8	Phenanthrene	5.1E-05	6.3E-05	0	0	0	0	5.1E-05	6.3E-05	Y	N
108-95-2	Phenol	0	0	2.4E-04	1.1E-03	0	0	2.4E-04	1.1E-03	Y	Y
7723-14-0	Phosphorus	0	0	5.6E-03	2.3E-02	0.53	2.32	0.54	2.34	Y	Y
129-00-0	Pyrene	5.0E-06	6.6E-06	0	0	0	0	5.0E-06	6.6E-06	Y	N
7782-49-2	Selenium	1.1E-06	4.6E-06	4.1E-04	1.8E-03	3.3E-04	1.4E-03	7.4E-04	3.2E-03	Y	Y
108-88-3	Toluene	5.2E-04	1.1E-03	3.2E-02	0.14	0	0	3.2E-02	0.14	Y	Y
1330-20-7	Xylene	2.5E-04	3.0E-04	3.1E-02	0.14	0	0	3.2E-02	0.14	Y	Y
Total HAP		9.0E-02	0.36	1.58	6.25	1.36	5.95	3.03	12.56		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

	0.2155	0.8650	8.3307	31.6474	86.1858	377.4936	94.7319	410.0060
TRUE	0.2155	0.8650	8.3307	31.6474	86.1858	377.4936	94.7319	410.0060
	chk	chk	chk-15	chk	chk	chk	chk	chk

Hazardous Air Pollutants (HAP)/Toxic Air Pollutants (TAP) Emissions Summary - continued

		Emissions[1]									
		Fuel Combustion		Process/Prod/Leach		Mining		Total			
CAS	**Non-HAP TAP**	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	HAP	TAP
7429-90-5	Aluminum	0	0	0.65	2.58	57.86	253.41	58.50	255.98	N	Y
7440-39-3	Barium	2.1E-04	8.4E-04	6.6E-03	2.7E-02	0.65	2.86	0.66	2.88	N	Y
1317-65-3	Calcium Carbonate	0	0	2.24	8.12	11.41	49.97	13.65	58.09	N	Y
1305-78-8	Calcium Oxide	0	0	0.70	0.95	0	0	0.70	0.95	N	Y
7440-50-8	Copper	4.0E-05	1.6E-04	4.9E-04	2.1E-03	4.1E-03	1.8E-02	4.6E-03	2.0E-02	N	Y
110-82-7	Cyclohexane	0	0	1.0E-03	4.6E-03	0	0	1.0E-03	4.6E-03	N	Y
7783-06-4	Hydrogen Sulfide	0	0	0.90	3.94	0	0	0.90	3.94	N	Y
7439-89-6	Iron	0	0	0.21	0.81	14.83	64.96	15.04	65.77	N	Y
7439-98-7	Molybdenum	5.2E-05	2.1E-04	4.2E-04	1.8E-03	8.1E-04	3.6E-03	1.3E-03	5.6E-03	N	Y
109-66-0	Pentane	0.12	0.50	0	0	0	0	0.12	0.50	N	Y
7440-22-4	Silver	0	0	4.1E-04	1.8E-03	4.1E-04	1.8E-03	8.2E-04	3.6E-03	N	Y
7664-93-9	Sulfuric Acid	0	0	2.03	8.89	0	0	2.03	8.89	N	Y
7440-28-0	Thallium	0	0	5.2E-04	2.2E-03	8.1E-03	3.6E-02	8.7E-03	3.8E-02	N	Y
7440-61-1	Uranium	0	0	5.2E-04	2.2E-03	8.1E-03	3.6E-02	8.7E-03	3.8E-02	N	Y
7440-62-2	Vanadium	1.1E-04	4.4E-04	7.3E-04	3.0E-03	2.3E-02	1.0E-01	2.4E-02	0.10	N	Y
25551-13-7	Trimethyl benzene	0	0	1.1E-02	4.8E-02	0	0	1.1E-02	4.8E-02	N	Y
7440-33-7	Tungsten	0	0	5.2E-04	2.2E-03	8.1E-03	3.6E-02	8.7E-03	3.8E-02	N	Y
7440-66-6	Zinc	1.4E-03	5.5E-03	8.0E-04	3.3E-03	2.9E-02	0.12	3.1E-02	0.13	N	Y
Total Non-HAP TAP		0.13	0.50	6.75	25.40	84.83	371.54	91.71	397.44		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

Conversions

2,000 lb/ton
8,760 hr/yr
24 hr/day

PROPANE COMBUSTION

Source Data

Source ID	Description	MMBtu/day	MMBtu/yr
Lime Process Heating			
LKC	PFR Shaft Lime Kiln Combustion	529.0	163,935
Ore Process Heating			
ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	17.0	510
CKB	Carbon Regeneration Kiln (Burners)	54.1	19,754
PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	2.4	876
HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	120.0	43,800
Subtotal		193.5	64,940
HVAC			
H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	96.0	35,040
H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	96.0	35,040
HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	96.0	35,040
HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	6.0	2,190
HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	6.0	2,190
HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	6.0	2,190
HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	12.0	4,380
HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	48.0	17,520
HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	72.0	26,280
Subtotal		438.0	159,870

PROPANE COMBUSTION - CONTINUED

HAP/TAP Emission Factors and Emissions

O.Heat_pph O.Heat_tpy L.Heat_pph L.Heat_tpy HVAC_pph HVAC_tpy lb/hr ton/yr

		Emission Factor[2]		Emissions[1] Ore Proc Heat		Lime Proc Heat		HVAC		Total			
CAS	Pollutant	lb/MMscf	lb/MMBtu[3]	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	TAP	A/C
91-57-6	2-Methylnaphthalene	2.4E-05	2.35E-8	1.9E-07	7.6E-07	5.2E-07	1.9E-06	4.3E-07	1.9E-06	1.1E-06	4.6E-06	N	
56-49-5	3-Methylchloranthrene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
57-97-6	7,12-Dimethylbenz(a)ant	< 1.6E-05	1.57E-8	1.3E-07	5.1E-07	3.5E-07	1.3E-06	2.9E-07	1.3E-06	7.6E-07	3.0E-06	N	
83-32-9	Acenaphthene	< 1.8E-06	1.76E-9	1.4E-08	5.7E-08	3.9E-08	1.4E-07	3.2E-08	1.4E-07	8.5E-08	3.4E-07	N	
208-96-8	Acenaphthylene	< 1.8E-06	1.76E-9	1.4E-08	5.7E-08	3.9E-08	1.4E-07	3.2E-08	1.4E-07	8.5E-08	3.4E-07	N	
120-12-7	Anthracene	< 2.4E-06	2.35E-9	1.9E-08	7.6E-08	5.2E-08	1.9E-07	4.3E-08	1.9E-07	1.1E-07	4.6E-07	N	
7440-38-2	Arsenic	2.0E-04	1.96E-7	1.5E-06	6.4E-06	3.7E-06	1.6E-05	3.6E-06	1.6E-05	8.7E-06	3.8E-05	Y	C
56-55-3	Benz(a)anthracene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
71-43-2	Benzene	2.1E-03	2.06E-6	1.5E-05	6.7E-05	3.9E-05	1.7E-04	3.8E-05	1.6E-04	9.1E-05	4.0E-04	Y	C
50-32-8	Benzo(a)pyrene	< 1.2E-06	1.18E-9	8.7E-09	3.8E-08	2.2E-08	9.6E-08	2.1E-08	9.4E-08	5.2E-08	2.3E-07	Y	C
205-99-2	Benzo(b)fluoranthene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
191-24-2	Benzo(g,h,i)perylene	< 1.2E-06	1.18E-9	9.5E-09	3.8E-08	2.6E-08	9.6E-08	2.1E-08	9.4E-08	5.7E-08	2.3E-07	N	
207-08-9	Benzo(k)fluoranthene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
7440-41-7	Beryllium	< 1.2E-05	1.18E-8	8.7E-08	3.8E-07	2.2E-07	9.6E-07	2.1E-07	9.4E-07	5.2E-07	2.3E-06	Y	C
7440-43-9	Cadmium	1.1E-03	1.08E-6	8.0E-06	3.5E-05	2.0E-05	8.8E-05	2.0E-05	8.6E-05	4.8E-05	2.1E-04	Y	C
7440-47-3	Chromium	1.4E-03	1.37E-6	1.1E-05	4.5E-05	3.0E-05	1.1E-04	2.5E-05	1.1E-04	6.6E-05	2.7E-04	Y	A
218-01-9	Chrysene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
7440-48-4	Cobalt	8.4E-05	8.24E-8	6.6E-07	2.7E-06	1.8E-06	6.8E-06	1.5E-06	6.6E-06	4.0E-06	1.6E-05	Y	A
53-70-3	Dibenzo(a,h)anthracene	< 1.2E-06	1.18E-9	8.7E-09	3.8E-08	2.2E-08	9.6E-08	2.1E-08	9.4E-08	5.2E-08	2.3E-07	Y	C
106-46-7	Dichlorobenzene	1.2E-03	1.18E-6	9.5E-06	3.8E-05	2.6E-05	9.6E-05	2.1E-05	9.4E-05	5.7E-05	2.3E-04	Y	A
206-44-0	Fluoranthene	3.0E-06	2.94E-9	2.4E-08	9.5E-08	6.5E-08	2.4E-07	5.4E-08	2.4E-07	1.4E-07	5.7E-07	N	
86-73-7	Fluorene	2.8E-06	2.75E-9	2.2E-08	8.9E-08	6.1E-08	2.3E-07	5.0E-08	2.2E-07	1.3E-07	5.3E-07	N	
50-00-0	Formaldehyde	7.5E-02	7.35E-5	5.5E-04	2.4E-03	1.4E-03	6.0E-03	1.3E-03	5.9E-03	3.3E-03	1.4E-02	Y	C
110-54-3	Hexane	1.8E+00	1.76E-3	1.4E-02	5.7E-02	3.9E-02	1.4E-01	3.2E-02	1.4E-01	8.5E-02	3.4E-01	Y	A
193-39-5	Indeno(1,2,3-cd)pyrene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
7439-96-5	Manganese	3.8E-04	3.73E-7	3.0E-06	1.2E-05	8.2E-06	3.1E-05	6.8E-06	3.0E-05	1.8E-05	7.2E-05	Y	A
7439-97-6	Mercury	2.6E-04	2.55E-7	2.1E-06	8.3E-06	5.6E-06	2.1E-05	4.7E-06	2.0E-05	1.2E-05	5.0E-05	N	
91-20-3	Naphthalene	6.1E-04	5.98E-7	4.8E-06	1.9E-05	1.3E-05	4.9E-05	1.1E-05	4.8E-05	2.9E-05	1.2E-04	Y	A
7440-02-0	Nickel	2.1E-03	2.06E-6	1.5E-05	6.7E-05	3.9E-05	1.7E-04	3.8E-05	1.6E-04	9.1E-05	4.0E-04	Y	C
85-01-8	Phenanthrene	1.7E-05	1.67E-8	1.3E-07	5.4E-07	3.7E-07	1.4E-06	3.0E-07	1.3E-06	8.1E-07	3.2E-06	N	
129-00-0	Pyrene	5.0E-06	4.90E-9	4.0E-08	1.6E-07	1.1E-07	4.0E-07	8.9E-08	3.9E-07	2.4E-07	9.5E-07	N	
7782-49-2	Selenium	< 2.4E-05	2.35E-8	1.9E-07	7.6E-07	5.2E-07	1.9E-06	4.3E-07	1.9E-06	1.1E-06	4.6E-06	Y	A
108-88-3	Toluene	3.4E-03	3.33E-6	2.7E-05	1.1E-04	7.3E-05	2.7E-04	6.1E-05	2.7E-04	1.6E-04	6.5E-04	Y	A
109-66-0	Pentane	2.6E+00	2.55E-3	2.1E-02	8.3E-02	5.6E-02	2.1E-01	4.7E-02	2.0E-01	1.2E-01	5.0E-01	Y	A
7440-39-3	Barium	4.4E-03	4.31E-6	3.5E-05	1.4E-04	9.5E-05	3.5E-04	7.9E-05	3.4E-04	2.1E-04	8.4E-04	Y	A
7440-50-8	Copper	8.5E-04	8.33E-7	6.7E-06	2.7E-05	1.8E-05	6.8E-05	1.5E-05	6.7E-05	4.0E-05	1.6E-04	Y	A
7439-98-7	Molybdenum	1.1E-03	1.08E-6	8.7E-06	3.5E-05	2.4E-05	8.8E-05	2.0E-05	8.6E-05	5.2E-05	2.1E-04	Y	A
7440-62-2	Vanadium	2.3E-03	2.25E-6	1.8E-05	7.3E-05	5.0E-05	1.8E-04	4.1E-05	1.8E-04	1.1E-04	4.4E-04	Y	A
7440-66-6	Zinc	2.9E-02	2.84E-5	2.3E-04	9.2E-04	6.3E-04	2.3E-03	5.2E-04	2.3E-03	1.4E-03	5.5E-03	Y	A
Total				3.6E-02	1.4E-01	9.8E-02	3.6E-01	8.1E-02	3.5E-01	2.1E-01	8.6E-01		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *AP-42, Table 1.4-3 & 1.4-4 (7/98) Natural Gas Combustion* 1.0766 1.0766

(3) *Natural Gas Higher Heating Value* 1,020 *MMBtu/MMscf* chk

Air Sciences Inc.	PROJECT TITLE: Stibnite Gold Project	BY: K. Lewis
	PROJECT NO: 335-20-3	PAGE: 5 OF: 19 SHEET: Calcs
AIR EMISSION CALCULATIONS	SUBJECT: HAP/TAP Emission Calculations	DATE: October 4, 2021

DIESEL COMBUSTION

Source Data

		Power Rating		Operation	Operation	Fuel Consumption[1] & [2]	
Source ID	Description	kW	hp	hr/day	hr/yr	MMBtu/day	MMBtu/yr
EDG1	Camp Emergency Generator	1,000	1,341	1	100	9.39	938.70
EDG2	Plant Emergency Generator #1	1,000	1,341	1	100	9.39	938.7
EDG3	Plant Emergency Generator #2	1,000	1,341	1	100	9.39	938.7
EDFP	Mill Fire Pump	200	268	1	100	1.88	187.7
Total						30.0	3,003.8

(1) *Based on brake specific fuel consumption for diesel generators* 7,000 *Btu/hp-hr* *AP-42 Tbl 3.3-1*

(2) *Heat Content of* 0.137 *MMBtu/gal* 1E+6 *Btu/MMBtu* 1.341 *hp/kW*

HAP/TAP Emission Factors and Emissions

lb/hr ton/yr

		Factor (lb/MMBtu)		Emissions (≤600 hp)		Emissions (>600 hp)		Total Emissions[1]			
	Pollutant	≤600 hp[2]	>600hp[3]	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	TAP	A/C
106-99-0	1,3-Butadiene	< 3.9E-05		8.4E-07	3.7E-06	0.0E+00	0.0E+00	8.4E-07	3.7E-06	Y	C
83-32-9	Acenaphthene	< 1.4E-06	4.7E-06	1.1E-07	1.3E-07	5.5E-06	6.6E-06	5.6E-06	6.7E-06	N	
208-96-8	Acenaphthylene	< 5.1E-06	9.2E-06	4.0E-07	4.7E-07	1.1E-05	1.3E-05	1.1E-05	1.3E-05	N	
75-07-0	Acetaldehyde	7.7E-04	2.5E-05	1.6E-05	7.2E-05	8.1E-06	3.5E-05	2.5E-05	1.1E-04	Y	C
107-02-8	Acrolein	< 9.3E-05	7.9E-06	7.2E-06	8.7E-06	9.2E-06	1.1E-05	1.6E-05	2.0E-05	Y	A
120-12-7	Anthracene	1.9E-06	1.2E-06	1.5E-07	1.8E-07	1.4E-06	1.7E-06	1.6E-06	1.9E-06	N	
56-55-3	Benz(a)anthracene	1.7E-06	6.2E-07	3.6E-08	1.6E-07	2.0E-07	8.8E-07	2.4E-07	1.0E-06	Y	C
71-43-2	Benzene	9.3E-04	7.8E-04	2.0E-05	8.8E-05	2.5E-04	1.1E-03	2.7E-04	1.2E-03	Y	C
50-32-8	Benzo(a)pyrene	< 1.9E-07	< 2.6E-07	4.0E-09	1.8E-08	8.3E-08	3.6E-07	8.7E-08	3.8E-07	Y	C
205-99-2	Benzo(b)fluoranthene	< 9.9E-08	< 1.1E-06	2.1E-09	9.3E-09	3.6E-07	1.6E-06	3.6E-07	1.6E-06	Y	C
191-24-2	Benzo(g,h,i)perylene	< 4.9E-07	< 5.6E-07	3.8E-08	4.6E-08	6.5E-07	7.8E-07	6.9E-07	8.3E-07	N	
207-08-9	Benzo(k)fluoranthene	< 1.6E-07	< 2.2E-07	3.3E-09	1.5E-08	7.0E-08	3.1E-07	7.3E-08	3.2E-07	Y	C
218-01-9	Chrysene	3.5E-07	1.5E-06	7.6E-09	3.3E-08	4.9E-07	2.2E-06	5.0E-07	2.2E-06	Y	C
53-70-3	Dibenzo(a,h)anthracene	< 5.8E-07	< 3.5E-07	1.2E-08	5.5E-08	1.1E-07	4.9E-07	1.2E-07	5.4E-07	Y	C
206-44-0	Fluoranthene	7.6E-06	4.0E-06	6.0E-07	7.1E-07	4.7E-06	5.7E-06	5.3E-06	6.4E-06	N	
86-73-7	Fluorene	2.9E-05	1.3E-05	2.3E-06	2.7E-06	1.5E-05	1.8E-05	1.7E-05	2.1E-05	N	
50-00-0	Formaldehyde	1.2E-03	7.9E-05	2.5E-05	1.1E-04	2.5E-05	1.1E-04	5.1E-05	2.2E-04	Y	C
193-39-5	Indeno(1,2,3-cd)pyrene	< 3.8E-07	< 4.1E-07	8.0E-09	3.5E-08	1.3E-07	5.8E-07	1.4E-07	6.2E-07	Y	C
91-20-3	Naphthalene	8.5E-05	1.3E-04	6.6E-06	8.0E-06	1.5E-04	1.8E-04	1.6E-04	1.9E-04	Y	A
85-01-8	Phenanthrene	2.9E-05	4.1E-05	2.3E-06	2.8E-06	4.8E-05	5.7E-05	5.0E-05	6.0E-05	N	
129-00-0	Pyrene	4.8E-06	3.7E-06	3.7E-07	4.5E-07	4.4E-06	5.2E-06	4.7E-06	5.7E-06	N	
108-88-3	Toluene	4.1E-04	2.8E-04	3.2E-05	3.8E-05	3.3E-04	4.0E-04	3.6E-04	4.3E-04	Y	A
1330-20-7	Xylene	2.9E-04	1.9E-04	2.2E-05	2.7E-05	2.3E-04	2.7E-04	2.5E-04	3.0E-04	Y	A
Total				1.4E-04	3.6E-04	1.1E-03	2.2E-03	1.2E-03	2.6E-03		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *AP-42, Tab. 3.3-2, 10/96, diesel engines (≤ 600 hp)* chk chk

(3) *AP-42, Tabs. 3.4-3 & 3.4-4, 10/96, large diesel engines (> 600 hp)*

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ORE PROCESSING

Source Data

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
OC1	Loader Transfer of Ore to Grizzly	3.500	0.639
OC2	Grizzly to Apron Feeder	3.500	0.639
OC3	Apron Feeder to Dribble Conveyor	3.500	0.639
OC4	Apron Feeder to Vibrating Grizzly	3.500	0.639
OC5	Dribble Conveyor to Vibrating Grizzly	3.500	0.639
OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	3.500	0.639
OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	30.000	5.475
OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	3.500	0.639
OC9	Stockpile Transfers to Reclaim Conveyors	16.560	3.022
OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	16.560	3.022
OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	16.560	3.022
OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge C	33.120	6.044
OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	3.864	0.705
Total		141.164	25.762

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration ppm[2]	Emissions[1] lb/hr	Emissions[1] ton/yr	TAP	A/C
7440-38-2	Arsenic	667	3.9E-03	1.7E-02	Y	C
7440-41-7	Beryllium	3.2	1.9E-05	8.2E-05	Y	C
7440-43-9	Cadmium	0.50	2.9E-06	1.3E-05	Y	C
7440-48-4	Cobalt	4	2.4E-05	1.0E-04	Y	A
7440-47-3	Chromium	9	5.3E-05	2.3E-04	Y	A
7439-97-6	Mercury [3]	0.96	5.6E-06	2.5E-05	N	
7439-96-5	Manganese	299	1.8E-03	7.7E-03	Y	A
7440-02-0	Nickel	2	1.2E-05	5.2E-05	Y	C
7439-92-1	Lead	8	4.7E-05	2.1E-04	N	
7440-36-0	Antimony	23	1.4E-04	5.9E-04	Y	A
7723-14-0	Phosphorus	650	3.8E-03	1.7E-02	Y	A
7782-49-2	Selenium [4]	0.40	2.4E-06	1.0E-05	Y	A
7440-22-4	Silver	0.50	2.9E-06	1.3E-05	Y	A
7429-90-5	Aluminum	71,000	4.2E-01	1.8E+00	Y	A
7440-39-3	Barium	800	4.7E-03	2.1E-02	Y	A
1317-65-3	Calcium Carbonate	14,000	8.2E-02	3.6E-01	Y	A
7440-50-8	Copper	5	2.9E-05	1.3E-04	Y	A
7439-89-6	Iron [4]	18,200	1.1E-01	4.7E-01	Y	A
7439-98-7	Molybdenum	1	5.9E-06	2.6E-05	Y	A
7440-28-0	Thallium	10	5.9E-05	2.6E-04	Y	A
7440-61-1	Uranium	10	5.9E-05	2.6E-04	Y	A
7440-62-2	Vanadium	28	1.6E-04	7.2E-04	Y	A
7440-33-7	Tungsten	10	5.9E-05	2.6E-04	Y	A
7440-66-6	Zinc	35	2.1E-04	9.0E-04	Y	A
Total			6.2E-01	2.7E+00		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *(Midas Gold 2017c) Median concentration of 55,000 SGP samples.*

[3] *(Midas Gold 2018e) Median ore concentration of 151,000 SGP samples; resource block model.*

[4] *(Midas Gold 2020) Median concentration of 56,000 SGP samples for Fe and 1,500 SGP samples for Se.*

1E+6 parts/ppm

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ORE CONCETRATION AND REFINING

Source Data

Source ID	Description	Subpart 7E Allowable Limit lb/yr[1]	Oper. hr/yr	% of Subpart 7E for Controlled Systems %		Controlled Hg Emissions lb/hr	ton/yr	lb/yr
AC	Autoclave	213.4	8,760	[2]		0.000023	0.00010	0.20
EW,MR,MF,CKD	Refinery Sources (C. Kiln, EW, Retort, Furn	16.8		20%	[3]	0.000384	0.00168	3.36
7439-97-6 Mercury	Total	230.2				0.000407	0.00178	3.56

[1] *Subpart 7E Limit - Ore Pretreatment Processes (CFR 2018b)*

$$\frac{84\ lb}{MMton} \times \frac{2{,}540{,}400\ ton}{yr} \times \frac{MMton}{1.0E+6\ ton} = \frac{213.4\ lb}{yr}$$

[1] *Subpart 7E Limit - Carbon Processes with Mercury Retorts*

$$\frac{0.8\ lb}{ton} \times \frac{21\ ton}{yr} = \frac{16.8\ lb}{yr}$$

[2] *Controlled SysCAD modeled emissions from Autoclave:* 0.0105 g/hr 2.3E-05 lb/hr 0.20 lb/yr (M3 2019)

[3] *Based on similar source (but with much higher ore Hg content) Hg reporting levels provided below:*

Goldstrike Refinery (2015 & 2016 Hg Reports) (NDEP 2015a) (NDEP 2016)

$$\frac{28.79\ lb}{yr} \times \frac{yr}{251.00\ ton} = \frac{0.11\ lb}{MMton} \times \frac{ton}{0.8\ lb} = 14.3\%$$

Twin Creeks Refinery (2015 & 2016 Hg Reports) (NDEP 2015a) (NDEP 2016)

$$\frac{31.27\ lb}{yr} \times \frac{yr}{142.77\ ton} = \frac{0.22\ lb}{MMton} \times \frac{ton}{0.8\ lb} = 27.4\%$$

HAP/TAP Emission Factors and Emission

AC_pph AC_tpy Refin_pph Refin_tpy lb/hr ton/yr

CAS No.	Pollutant	Emission Factor[1]	Autoclave lb/hr	Autoclave ton/yr	Refinery lb/hr	Refinery ton/yr	Total Emissions lb/hr	Total Emissions ton/yr	TAP	A/C
7440-38-2	Arsenic	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7440-41-7	Beryllium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7440-43-9	Cadmium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7440-48-4	Cobalt	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-47-3	Chromium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7439-97-6	Mercury	see above	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	N	
7439-96-5	Manganese	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-02-0	Nickel	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7439-92-1	Lead	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	N	
7440-36-0	Antimony	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7723-14-0	Phosphorus	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7782-49-2	Selenium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-22-4	Silver	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7429-90-5	Aluminum	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-39-3	Barium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
1317-65-3	Calcium Carbonate	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-50-8	Copper	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7439-89-6	Iron	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7439-98-7	Molybdenum	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-28-0	Thallium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-61-1	Uranium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-62-2	Vanadium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-33-7	Tungsten	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-66-6	Zinc	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
Total			5.5E-04	2.4E-03	9.2E-03	4.0E-02	9.8E-03	4.3E-02		

[1] *Hg is the most difficult metal to control due to it existing in both particulate and gaseous form. Therefore, all other metals are conservatively estimated to be equal to or less than the Hg emissions.*

0.0525 0.0525 chk

7664-93-9	Sulfuric Acid	Autoclave	2.03	8.89			2.03	8.89
7783-06-4	Hydrogen Sulfid	Autoclave	0.90	3.94			0.90	3.94
592-01-8	Cyanide	Point Sources - 5 EW Cells			0.0012	0.0053	0.00	0.01
Total			2.93	12.84	0.01	0.05	2.94	12.88

ORE CONCETRATION AND REFINING - CONTINUED

Source Data

Source ID	Description	Throughput ton/day	Throughput ton/yr	Operation hr/day	Operation hr/yr
AC	Autoclave	6,960	2,540,400	24	8,760

Autoclave HAP/TAP Emission Factors and Emission lb/hr ton/yr

CAS No.	Pollutant	Emission Factor		Emissions[1] lb/hr	Emissions[1] ton/yr
7664-93-9	Sulfuric Acid	0.007	lb/ton[2]	2.03	8.89
7783-06-4	Hydrogen Sulfide	0.9	lb/hr[3]	0.90	3.94

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *H2SO4 is based on Acidic Autoclave test data (APT 2010)*

[3] *H2S is based on Acidic Autoclave test data (APT 2013)*

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LEACHING OPERATION

Cyanide (HCN) Source Data, Emission Factors, and Emissions

Source ID	Description	Dia. ft[1]	pH[1]	Free CN- g/m3[1]	T C[1]	pKa	a0	H	kG[2] m/s	Fa*Fw	g/s	lb/hr	ton/yr
												lb/hr	ton/yr
TSF	***Fugitive Sources***												
TSF	Tailings Maint. Pond	76	7.75	1	3.74	9.803	0.9912	0.0025	1.89E-05	0.641	1.27E-05	0.0001	0.0004
MILLTA	CN Detox Tank 1	40	8.5	25	25	9.250	0.8490	0.0055	0.000311	0.688	0.002891	0.0229	0.101
MILLTA	CN Detox Tank 2	40	8.5	25	25	9.250	0.8490	0.0055	0.000311	0.688	0.002891	0.0229	0.101
MILLTA	CIP Leach Tank 1	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIP Leach Tank 2	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIP Leach Tank 3	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIP Leach Tank 4	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIL Tank 1	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 2	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 3	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 4	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 5	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 6	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIP Tank 1	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 2	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 3	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 4	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 5	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 6	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
		Acres[1]											
TSF	Tails, Aqueous Surface	110.222	7.75	1	3.74	9.803	0.9912	0.0025	1.89E-05	0.421	0.008845	0.0702	0.307
TSF	Tails, Wet Sediment	110.222							5.31E-08	0.421	0.009961	0.0791	0.346
TSF	Tails, Dry Sediment	110.222							2.33E-08	1	0.010375	0.0823	0.361
		330.666											
592-01-8	Cyanide Fugitive Sources - Subtotal											0.4527	1.983
75-15-0	Carbon Disulfide											0.01446	0.06332
	Point Sources												
EW	EW Cells	[3]										0.0006	0.003
EW	Preg/Barren Tanks	[3]										0.0006	0.003
592-01-8	Cyanide Point Sources - Subtotal											0.0012	0.0053
	Total											0.454	1.988

[1] *(Midas Gold 2016)(M3 2017c)(M3 2017d)*

[2] *The emission factors and caculation methodology are from the EPA directed HCN study: (Card, T. 2009)(EPA 2009)(Schmidt 2010)*

[3] *(APT 2009)*

Carbon Disulfide Emissions from Xanthate Decomposition

CAS No.	Pollutant	Xanthate[1] ton/yr	Molar Decomp.[2]	CS_2 MW Ratio	Temperature Adj. Factor[3]	Emissions lb/hr	Emissions ton/yr
						lb/hr	ton/yr
75-15-0	Carbon Disulfide	1,700	0.99%	0.376	1%	0.0145	0.063

	MW	
Xanthate (PAX)	202.37	$C6H11KOS_2$
Carbon disulfide	76.139	CS_2

[1] *(Midas Gold 2016) p. 12-11*

[2] *(Air Sciences 2020) molar decomposition of xanthate in solution to CS2 gas*

[3] *(Air Sciences 2020) based on the comparison of CS2 generation at 25C and 70C*

Conversions

8,760	hr/yr	453.5929	g/lb
2,000	lb/ton	3.28084	ft/m
4,046.86	m2/acre	3,600	s/hr

Wind adjustment factor Fw 1

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LIME PRODUCTION

Source Data

Source ID	Description	Throughput ton/day	Throughput ton/yr	PM Emissions lb/day	PM Emissions ton/yr
LS1	Limestone transfer to Primary Crusher Hopper			3.39	0.48
LS2	Primary Crushing and Associated Transfers In and Out			6.10	0.86
LS3	Primary Screening and Associated Transfers In and Out			28.25	3.97
LS4	Secondary Crushing and Associated Transfers In and Out			6.10	0.86
LS5	Secondary Screening and Associated Transfers In and Out			28.25	3.97
LS6	Limestone transfer to Ball Mill Feed Bin			3.39	0.48
LS7	Limestone transfer to Ball Mill Feed Conveyor			3.39	0.48
LS8	Ball Mill Feed transfer to Ball Mill			3.39	0.48
LSBM	Limestone Ball Mill			45.65	6.42
LS9	Limestone transfer to Kiln Feed Bin			0.80	0.12
LS10	Limestone transfer to Lime Kiln Feed Conveyor			0.80	0.12
LS11	Fines Screening and Associated Transfers In and Out			6.68	1.03
Subtotal LS1-11				136.18	19.28
LS12	Kiln Feed transfer to PFR Shaft Lime Kiln			0.80	0.12
LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	169	52,377	21.97	3.40
Subtotal LS12,LK				22.77	3.53
Total				158.95	22.80

HAP/TAP Emission Factors and Emissions

			LS_pph	LS_tpy	LS12_pph	LS12_tpy	LK_pph	LK_tpy	lb/hr	ton/yr		
		Concentration	LS1-11,LSBM		LS12		Lime Kiln		Emissions[1]			
CAS No.	Pollutant	ppm[2]	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	TAP	A/C
7440-38-2	Arsenic	23	1.01E-04	4.43E-04	6.51E-07	2.85E-06	1.79E-05	7.83E-05	1.20E-04	5.24E-04	Y	C
7440-41-7	Beryllium	0.8	3.52E-06	1.54E-05	2.27E-08	9.92E-08	6.22E-07	2.72E-06	4.17E-06	1.82E-05	Y	C
7440-43-9	Cadmium	0.25	1.10E-06	4.82E-06	7.08E-09	3.10E-08	1.94E-07	8.51E-07	1.30E-06	5.70E-06	Y	C
7440-48-4	Cobalt	4	2.27E-05	7.71E-05	1.34E-07	4.96E-07	3.66E-06	1.36E-05	2.65E-05	9.12E-05	Y	A
7440-47-3	Chromium	15	8.51E-05	2.89E-04	5.01E-07	1.86E-06	1.37E-05	5.11E-05	9.93E-05	3.42E-04	Y	A
7439-97-6	Mercury [3]	0.02	1.13E-07	3.86E-07	6.68E-10	2.48E-09	2.82E-04	1.05E-03	2.82E-04	1.05E-03	N	
7439-96-5	Manganese	236.5	1.34E-03	4.56E-03	7.89E-06	2.93E-05	2.16E-04	8.05E-04	1.57E-03	5.39E-03	Y	A
7440-02-0	Nickel	5	2.20E-05	9.64E-05	1.42E-07	6.20E-07	3.89E-06	1.70E-05	2.60E-05	1.14E-04	Y	C
7439-92-1	Lead	3	1.70E-05	5.78E-05	1.00E-07	3.72E-07	2.75E-06	1.02E-05	1.99E-05	6.84E-05	N	
7440-36-0	Antimony	2.5	1.42E-05	4.82E-05	8.34E-08	3.10E-07	2.29E-06	8.51E-06	1.66E-05	5.70E-05	Y	A
7723-14-0	Phosphorus	130	7.38E-04	2.51E-03	4.34E-06	1.61E-05	1.19E-04	4.43E-04	8.61E-04	2.96E-03	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22600	1.28E-01	4.36E-01	7.54E-04	2.80E-03	2.07E-02	7.69E-02	1.50E-01	5.15E-01	Y	A
7440-39-3	Barium	145	8.23E-04	2.79E-03	4.84E-06	1.80E-05	1.33E-04	4.94E-04	9.60E-04	3.31E-03	Y	A
1317-65-3	Calcium Carbonate	274500	1.56E+00	5.29E+00	9.16E-03	3.40E-02	2.51E-01	9.35E-01	1.82E+00	6.26E+00	Y	A
7440-50-8	Copper	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7439-89-6	Iron	10350	5.87E-02	1.99E-01	3.45E-04	1.28E-03	9.47E-03	3.52E-02	6.85E-02	2.36E-01	Y	A
7439-98-7	Molybdenum	0.5	2.84E-06	9.64E-06	1.67E-08	6.20E-08	4.58E-07	1.70E-06	3.31E-06	1.14E-05	Y	A
7440-28-0	Thallium	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7440-61-1	Uranium	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7440-62-2	Vanadium	15.5	8.79E-05	2.99E-04	5.17E-07	1.92E-06	1.42E-05	5.28E-05	1.03E-04	3.53E-04	Y	A
7440-33-7	Tungsten	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7440-66-6	Zinc	18	1.02E-04	3.47E-04	6.01E-07	2.23E-06	1.65E-05	6.13E-05	1.19E-04	4.10E-04	Y	A
Subtotal			1.75E+00	5.94E+00	1.03E-02	3.82E-02	2.82E-01	1.05E+00	2.04E+00	7.03E+00	9.0667	9.0667
7647-01-0	Hydrogen Chloride	0.14 lb/ton product[4]					0.99	3.67	0.99	3.67		chk

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *(M3 2018) Median concentrations of SGP limestone material. Metals with medians below the detection limit (DL) are set to 1/2DL.*

[3] *Hg emissions from the Lime Kiln are conservatively estimated assuming 100% volatilization of all Hg in the limestone*

[4] *(EPA 1999b)*

1E+6 parts/ppm

LIME PRODUCTION - CONTINUED

Source Data

Source ID	description Description	PM_ppd PM Emissions lb/day	PM_tpy PM Emissions ton/yr
LS1L	Mill Lime Silo #1 Loading	0.248	0.002
LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	1.200	0.011
MillS2L	Mill Lime Silo #2 Loading	0.248	0.002
MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	1.200	0.011
ACS1L	AC Lime Silo #1 Loading	0.990	0.009
ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.304	0.042
ACS2L	AC Lime Silo #2 Loading	0.990	0.009
ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.304	0.042
ACS3L	AC Lime Silo #3 Loading	0.990	0.009
ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.304	0.042
ACS4L	AC Lime Silo #4 Loading	0.495	0.004
ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	2.304	0.021
Subtotal - Mill & AC Lime Silos		15.576	0.203
LCR	Lime Mill Crushing and associated transfers In and Out	6.828	1.058
LSL	Pebble Lime Silo Loading via Bucket Elevator	0.149	0.023
LSU	Pebble Lime Silo discharge to Lime Slaker	0.015	0.002
Subtotal - Lime Mfg		6.991	1.083
Total		22.567	1.286

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration ppm[2]	MillAC_pph Mill and AC lb/hr	MillAC_tpy Mill and AC ton/yr	LimeM_pph Lime Mfg lb/hr	LimeM_tpy Lime Mfg ton/yr	lb/hr Emissions[1] lb/hr	ton/yr Emissions[1] ton/yr	TAP	A/C
7440-38-2	Arsenic	23	1.06E-06	4.66E-06	5.69E-06	2.49E-05	6.75E-06	2.96E-05	Y	C
7440-41-7	Beryllium	0.8	3.70E-08	1.62E-07	1.98E-07	8.67E-07	2.35E-07	1.03E-06	Y	C
7440-43-9	Cadmium	0.25	1.16E-08	5.07E-08	6.18E-08	2.71E-07	7.34E-08	3.22E-07	Y	C
7440-48-4	Cobalt	4	2.60E-06	8.11E-07	1.17E-06	4.33E-06	3.76E-06	5.14E-06	Y	A
7440-47-3	Chromium	15	9.74E-06	3.04E-06	4.37E-06	1.63E-05	1.41E-05	1.93E-05	Y	A
7439-97-6	Mercury	0.02	1.30E-08	4.05E-09	5.83E-09	2.17E-08	1.88E-08	2.57E-08	N	
7439-96-5	Manganese	236.5	1.53E-04	4.79E-05	6.89E-05	2.56E-04	2.22E-04	3.04E-04	Y	A
7440-02-0	Nickel	5	2.31E-07	1.01E-06	1.24E-06	5.42E-06	1.47E-06	6.43E-06	Y	C
7439-92-1	Lead	3	1.95E-06	6.08E-07	8.74E-07	3.25E-06	2.82E-06	3.86E-06	N	
7440-36-0	Antimony	2.5	1.62E-06	5.07E-07	7.28E-07	2.71E-06	2.35E-06	3.22E-06	Y	A
7723-14-0	Phosphorus	130	8.44E-05	2.63E-05	3.79E-05	1.41E-04	1.22E-04	1.67E-04	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22,600	1.47E-02	4.58E-03	6.58E-03	2.45E-02	2.13E-02	2.91E-02	Y	A
7440-39-3	Barium	145	9.41E-05	2.94E-05	4.22E-05	1.57E-04	1.36E-04	1.86E-04	Y	A
1305-78-8	Calcium Oxide	740,000 [3]	4.80E-01	1.50E-01	2.16E-01	8.02E-01	6.96E-01	9.52E-01	Y	A
7440-50-8	Copper	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7439-89-6	Iron	10350	6.72E-03	2.10E-03	3.01E-03	1.12E-02	9.73E-03	1.33E-02	Y	A
7439-98-7	Molybdenum	0.5	3.25E-07	1.01E-07	1.46E-07	5.42E-07	4.70E-07	6.43E-07	Y	A
7440-28-0	Thallium	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7440-61-1	Uranium	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7440-62-2	Vanadium	15.5	1.01E-05	3.14E-06	4.52E-06	1.68E-05	1.46E-05	1.99E-05	Y	A
7440-33-7	Tungsten	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7440-66-6	Zinc	18	1.17E-05	3.65E-06	5.24E-06	1.95E-05	1.69E-05	2.31E-05	Y	A
Total			5.02E-01	1.57E-01	2.25E-01	8.38E-01	7.27E-01	9.95E-01		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *See LIME PRODUCTION, page 10*

[3] *(NLA 2007) 40% to 74% CaO in lime*

1E+6 parts/ppm

Air Sciences Inc.	PROJECT TITLE: Stibnite Gold Project	BY: K. Lewis		
	PROJECT NO: 335-20-3	PAGE: 12	OF: 19	SHEET: Calcs
AIR EMISSION CALCULATIONS	SUBJECT: HAP/TAP Emission Calculations	DATE: October 4, 2021		

AGGREGATE PRODUCTION

Source Data

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conve	15.00	2.74
PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conve	15.00	2.74
Total		30.00	5.48

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration ppm[2]	Emissions[1] lb/hr	Emissions[1] ton/yr	TAP	A/C
7440-38-2	Arsenic	23	2.88E-05	1.26E-04	Y	C
7440-41-7	Beryllium	0.8	1.00E-06	4.38E-06	Y	C
7440-43-9	Cadmium	0.25	3.13E-07	1.37E-06	Y	C
7440-48-4	Cobalt	4	5.00E-06	2.19E-05	Y	A
7440-47-3	Chromium	15	1.88E-05	8.21E-05	Y	A
7439-97-6	Mercury	0.02	2.50E-08	1.10E-07	N	
7439-96-5	Manganese	236.5	2.96E-04	1.29E-03	Y	A
7440-02-0	Nickel	5	6.25E-06	2.74E-05	Y	C
7439-92-1	Lead	3	3.75E-06	1.64E-05	N	
7440-36-0	Antimony	2.5	3.13E-06	1.37E-05	Y	A
7723-14-0	Phosphorus	130	1.63E-04	7.12E-04	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22600	2.83E-02	1.24E-01	Y	A
7440-39-3	Barium	145	1.81E-04	7.94E-04	Y	A
1317-65-3	Calcium Carbonate	274500	3.43E-01	1.50E+00	Y	A
7440-50-8	Copper	5	6.25E-06	2.74E-05	Y	A
7439-89-6	Iron	10350	1.29E-02	5.67E-02	Y	A
7439-98-7	Molybdenum	0.5	6.25E-07	2.74E-06	Y	A
7440-28-0	Thallium	5	6.25E-06	2.74E-05	Y	A
7440-61-1	Uranium	5	6.25E-06	2.74E-05	Y	A
7440-62-2	Vanadium	15.5	1.94E-05	8.49E-05	Y	A
7440-33-7	Tungsten	5	6.25E-06	2.74E-05	Y	A
7440-66-6	Zinc	18	2.25E-05	9.86E-05	Y	A
Total			3.85E-01	1.69E+00		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *See LIME PRODUCTION, page 10*

1E+6 parts/ppm

CONCRETE PRODUCTION

Source Data

TP_unit/day TP_unit/yr

description

Source ID	Description	Throughput ton/day	Throughput ton/yr
CS1L	Cement/Shotcrete Silo #1 Loading	164	60,000
CS1U	Cement/Shotcrete Silo #1 Unloading	164	60,000
CS2L	Cement/Shotcrete Silo #2 Loading	164	60,000
CS2U	Cement/Shotcrete Silo #2 Unloading	164	60,000
CM	Central Mixer Loading	164	60,000
	Subtotal Cement Silo Filling	658	240,000
	Subtotal Central Mix Batching	164	60,000

HAP/TAP Emission Factors and Emissions

CF_pph CF_tpy CM_pph CM_tpy lb/hr ton/yr

CAS No.	HAP/TAP	Silo Fill lb/ton[2]	Central Mixer lb/ton[3]	Cement Silo L/U lb/hr	Cement Silo L/U ton/yr	Central Mix Batching lb/hr	Central Mix Batching ton/yr	Total Emissions[3] lb/hr	Total Emissions[3] ton/yr	TAP	A/C
7440-38-2	Arsenic	4.24E-09	2.96E-07	1.16E-7	5.09E-7	2.03E-6	8.88E-6	2.14E-6	9.39E-6	Y	C
7440-41-7	Beryllium	4.86E-10		1.33E-8	5.83E-8	--	--	1.33E-8	5.83E-8	Y	C
7440-43-9	Cadmium		7.10E-10	--	--	4.86E-9	2.13E-8	4.86E-9	2.13E-8	Y	C
7440-47-3	Chromium	2.90E-08	1.27E-07	7.95E-7	3.48E-6	8.70E-7	3.81E-6	1.66E-6	7.29E-6	Y	A
18540-29-9	Cr (VI)	5.80E-09	2.70E-08	1.59E-7	6.96E-7	1.85E-7	8.11E-7	3.44E-7	1.51E-6	Y	C
7439-92-1	Lead	1.09E-08	3.66E-08	2.99E-7	1.31E-6	2.51E-7	1.10E-6	5.49E-7	2.41E-6	N	
7439-96-5	Manganese	1.17E-07	3.78E-06	3.21E-6	1.40E-5	2.59E-5	1.13E-4	2.91E-5	1.27E-4	Y	A
7440-02-0	Nickel	4.18E-08	2.48E-07	1.15E-6	5.02E-6	1.70E-6	7.44E-6	2.84E-6	1.25E-5	Y	C
7723-14-0	Phosphorus		1.20E-06	--	--	8.22E-6	3.60E-5	8.22E-6	3.60E-5	Y	A
Total				5.73E-6	2.51E-5	3.91E-5	1.71E-4	4.49E-5	1.97E-4		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *AP-42, Table 11.12-8, (06/06) Cement Silo Filing, Controlled.* 20% *Cr (VI), IDEQ email on 11/23/2020* 0.0002 0.0002

(3) *AP-42, Table 11.12-8, (06/06) Central Mix Batching, Controlled.* 21.29% *Cr (VI), IDEQ email on 11/23/2020* chk

Conversions

24 hr/day

CONCRETE PRODUCTION - CONTINUED

Source Data

PM_ppd PM_tpy

Source ID	description Description	PM Emissions lb/day	ton/yr
CAL	Aggregate Bin Loading	16.56	1.73
CAU	Aggregate Bin Unloading	16.56	1.73
Total		33.12	3.45

HAP/TAP Emission Factors and Emissions

lb/hr ton/yr

CAS No.	Pollutant	Concentration ppm[2]	Emissions[1] lb/hr	ton/yr	TAP	A/C
7440-38-2	Arsenic	23	1.81E-05	7.94E-05	Y	C
7440-41-7	Beryllium	0.8	6.30E-07	2.76E-06	Y	C
7440-43-9	Cadmium	0.25	1.97E-07	8.63E-07	Y	C
7440-48-4	Cobalt	4	5.52E-06	1.38E-05	Y	A
7440-47-3	Chromium	15	2.07E-05	5.18E-05	Y	A
7439-97-6	Mercury	0.02	2.76E-08	6.90E-08	N	
7439-96-5	Manganese	236.5	3.26E-04	8.16E-04	Y	A
7440-02-0	Nickel	5	3.94E-06	1.73E-05	Y	C
7439-92-1	Lead	3	4.14E-06	1.04E-05	N	
7440-36-0	Antimony	2.5	3.45E-06	8.63E-06	Y	A
7723-14-0	Phosphorus	130	1.79E-04	4.49E-04	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22600	3.12E-02	7.80E-02	Y	A
7440-39-3	Barium	145	2.00E-04	5.00E-04	Y	A
7440-50-8	Copper	5	6.90E-06	1.73E-05	Y	A
7439-89-6	Iron	10350	1.43E-02	3.57E-02	Y	A
7439-98-7	Molybdenum	0.5	6.90E-07	1.73E-06	Y	A
7440-28-0	Thallium	5	6.90E-06	1.73E-05	Y	A
7440-61-1	Uranium	5	6.90E-06	1.73E-05	Y	A
7440-62-2	Vanadium	15.5	2.14E-05	5.35E-05	Y	A
7440-33-7	Tungsten	5	6.90E-06	1.73E-05	Y	A
7440-66-6	Zinc	18	2.48E-05	6.21E-05	Y	A
Total			4.63E-02	1.16E-01		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *See LIME PRODUCTION, page 10*

1E+6 parts/ppm

FUEL STORAGE - GASOLINE

Source Data

Source ID	description Description	VOC_ppd VOC Emissions lb/day	VOC_tpy VOC Emissions ton/yr
TG1	Mine Site Gasoline Tank #1	5.25	0.96
TG2	Mine Site Gasoline Tank #2	5.25	0.96
Total		10.49	1.91

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration wt. %[2]	lb/hr Emissions[1] lb/hr	ton/yr Emissions[1] ton/yr	TAP	A/C
71-43-2	Benzene	1.608%	7.03E-03	3.08E-02	Y	C
92-52-4	Biphenyl	0.010%	4.37E-05	1.91E-04	Y	A
110-82-7	Cyclohexane	0.240%	1.05E-03	4.60E-03	Y	A
110-54-3	Hexane	7.138%	3.12E-02	1.37E-01	Y	A
91-20-3	Naphthalene	0.444%	1.94E-03	8.50E-03	Y	A
108-95-2	Phenol	0.055%	2.40E-04	1.05E-03	Y	A
108-88-3	Toluene	7.212%	3.15E-02	1.38E-01	Y	A
25551-13-7	Trimethyl benzene	2.500%	1.09E-02	4.79E-02	Y	A
1330-20-7	Xylene	7.170%	3.13E-02	1.37E-01	Y	A
Total			1.15E-01	5.05E-01		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *(EPA 1999a)*

MINING FUGITIVE EMISSIONS

Dust Emissions

Source Data **Model Scenario** **W3** **180,000 T/day Emissions**

Operating schedule 365 day/yr

Clean rock cap (CR >0% [1]

[1] *(Perpetua 2021h) Percent of VMTs on haul roads capped with CR*
Roads outside of the pits and DRSFs are capped with CR

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
YPP	Yellow Pine Pit	--	--
HFP	Hangar Flats Pit	--	--
WEP	West End Pit	1,887.91	344.54
BT	Bradley Tailings	--	--
YPPBL	Yellow Pine Pit Blasting	--	--
HFPBL	Hangar Flats Pit Blasting	--	--
WEPBL	West End Pit Blasting	643.03	117.35
BTBL	Bradley Tailings Blasting	--	--
STKP	PC Stockpile	--	--
FDRSF	Fiddle DRSF	--	--
HFDRSF	Hangar Flats DRSF	289.91	52.91
YPDRSF	Yellow Pine DRSF	--	--
WEDRSF	West End DRSF	--	--
HR000	Haul Roads	16,697.74	3,047.34
TSF	Tailing Storage Facility	--	--
ACCRD	Access Roads	38.10	6.95
UGEXP	Scout Portal	0.008	0.002
Total		19,556.71	3,569.10

TSF, ACCRD, UGEXP 38.11 6.95 chk 3569.10

HAP/TAP Emission Factors		ORE	DR	CR	HRD	Borrow	AR
		Concentration					
CAS No.	Pollutant	ppm[1]	ppm[1]	ppm[3]	ppm[4]	ppm[5]	ppm
7440-38-2	Arsenic	667	667	90	667	2.5	667
7440-41-7	Beryllium	3.2	3.2		3.2		3.2
7440-43-9	Cadmium	0.5	0.5		0.5		0.5
7440-48-4	Cobalt	4	4		4		4
7440-47-3	Chromium	9	9		9		9
7439-97-6	Mercury [2]	0.96	0.6		0.6		0.6
7439-96-5	Manganese	299	299		299		299
7440-02-0	Nickel	2	2		2		2
7439-92-1	Lead	8	8		8		8
7440-36-0	Antimony	23	23		23		23
7723-14-0	Phosphorus	650	650		650		650
7782-49-2	Selenium	0.4	0.4		0.4		0.4
7440-22-4	Silver	0.5	0.5		0.5		0.5
7429-90-5	Aluminum	71000	71000		71000		71000
7440-39-3	Barium	800	800		800		800
1317-65-3	Calcium Carbonate	14000	14000		14000		14000
7440-50-8	Copper	5	5		5		5
7439-89-6	Iron	18200	18200		18200		18200
7439-98-7	Molybdenum	1	1		1		1
7440-28-0	Thallium	10	10		10		10
7440-61-1	Uranium	10	10		10		10
7440-62-2	Vanadium	28	28		28		28
7440-33-7	Tungsten	10	10		10		10
7440-66-6	Zinc	35	35		35		35

[1] *(Midas Gold 2017c)* *Median concentration of 55,000 SGP samples.* *1E+6 parts/ppm*

[2] *(Midas Gold 2018e)* *Median ore and development rock (DR) concentrations of 151,000 samples; resource block model.*

[3] *(Perpetua 2021g)* *Median concentration of 265 SGP samples.*

[4] *HRD: haul road - emissions calculated based on 0% of the total VMT occuring on CR*

[5] *(ALS 2018)* *Median concentration of 8 SGP samples.*

DR DR DR DR DR DR DR DR ORE DR DR DR DR HRD DR/AR

MINING FUGITIVE EMISSIONS - CONTINUED **Model Scenario W3** DR **180,000 T/day Emissions**

HAP/TAP Emissions

Hourly [1] YPP_pph HFP_pph WEP_pph BT_pph YPPBL_pph HFPBL_pph WEPBL_pph BTBL_pph STKP_pph FDRSF_pph HFDRSF_pph YPDRSF_pph WEDRSF_pph HR000_pph CCRD, UGE lb/hr

CAS No.	Pollutant	YPP lb/hr	HFP lb/hr	WEP lb/hr	BT lb/hr	YPPBL lb/hr	HFPBL lb/hr	WEPBL lb/hr	BTBL lb/hr	STKP lb/hr	FDRSF lb/hr	HFDRSF lb/hr	YPDRSF lb/hr	WEDRSF lb/hr	HR000 lb/hr	TSF, ACCRD, UGEXP lb/hr	Total lb/hr
7440-38-2	Arsenic	0	0	0.052	0	0	0	0.018	0	0	0	8.1E-3	0	0	0.464	1.1E-3	0.544
7440-41-7	Beryllium	0	0	2.5E-4	0	0	0	8.6E-5	0	0	0	3.9E-5	0	0	2.2E-3	5.1E-6	2.6E-3
7440-43-9	Cadmium	0	0	3.9E-5	0	0	0	1.3E-5	0	0	0	6.0E-6	0	0	3.5E-4	7.9E-7	4.1E-4
7440-48-4	Cobalt	0	0	3.1E-4	0	0	0	1.1E-4	0	0	0	4.8E-5	0	0	2.8E-3	6.4E-6	3.3E-3
7440-47-3	Chromium	0	0	7.1E-4	0	0	0	2.4E-4	0	0	0	1.1E-4	0	0	6.3E-3	1.4E-5	7.3E-3
7439-97-6	Mercury	0	0	4.7E-5	0	0	0	1.6E-5	0	0	0	7.2E-6	0	0	4.2E-4	9.5E-7	4.9E-4
7439-96-5	Manganese	0	0	0.024	0	0	0	8.0E-3	0	0	0	3.6E-3	0	0	0.208	4.7E-4	0.244
7440-02-0	Nickel	0	0	1.6E-4	0	0	0	5.4E-5	0	0	0	2.4E-5	0	0	1.4E-3	3.2E-6	1.6E-3
7439-92-1	Lead	0	0	6.3E-4	0	0	0	2.1E-4	0	0	0	9.7E-5	0	0	5.6E-3	1.3E-5	6.5E-3
7440-36-0	Antimony	0	0	1.8E-3	0	0	0	6.2E-4	0	0	0	2.8E-4	0	0	0.016	3.7E-5	0.019
7723-14-0	Phosphorus	0	0	0.051	0	0	0	0.017	0	0	0	7.9E-3	0	0	0.452	1.0E-3	0.530
7782-49-2	Selenium	0	0	3.1E-5	0	0	0	1.1E-5	0	0	0	4.8E-6	0	0	2.8E-4	6.4E-7	3.3E-4
7440-22-4	Silver	0	0	3.9E-5	0	0	0	1.3E-5	0	0	0	6.0E-6	0	0	3.5E-4	7.9E-7	4.1E-4
7429-90-5	Aluminum	0	0	5.585	0	0	0	1.902	0	0	0	0.858	0	0	49.397	0.113	57.855
7440-39-3	Barium	0	0	0.063	0	0	0	0.021	0	0	0	9.7E-3	0	0	0.557	1.3E-3	0.652
1317-65-3	Calcium Ca	0	0	1.101	0	0	0	0.375	0	0	0	0.169	0	0	9.740	0.022	11.408
7440-50-8	Copper	0	0	3.9E-4	0	0	0	1.3E-4	0	0	0	6.0E-5	0	0	3.5E-3	7.9E-6	4.1E-3
7439-89-6	Iron	0	0	1.432	0	0	0	0.488	0	0	0	0.220	0	0	12.662	0.029	14.831
7439-98-7	Molybdenu	0	0	7.9E-5	0	0	0	2.7E-5	0	0	0	1.2E-5	0	0	7.0E-4	1.6E-6	8.1E-4
7440-28-0	Thallium	0	0	7.9E-4	0	0	0	2.7E-4	0	0	0	1.2E-4	0	0	7.0E-3	1.6E-5	8.1E-3
7440-61-1	Uranium	0	0	7.9E-4	0	0	0	2.7E-4	0	0	0	1.2E-4	0	0	7.0E-3	1.6E-5	8.1E-3
7440-62-2	Vanadium	0	0	2.2E-3	0	0	0	7.5E-4	0	0	0	3.4E-4	0	0	0.019	4.4E-5	0.023
7440-33-7	Tungsten	0	0	7.9E-4	0	0	0	2.7E-4	0	0	0	1.2E-4	0	0	7.0E-3	1.6E-5	8.1E-3
7440-66-6	Zinc	0	0	2.8E-3	0	0	0	9.4E-4	0	0	0	4.2E-4	0	0	0.024	5.6E-5	0.029
Total		0	0	8.320	0	0	0	2.834	0	0	0	1.278	0	0	73.586	0.168	86.185

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.* chk 86.1849 86.1849

DR DR DR DR DR DR DR DR ORE DR DR DR DR HRD DR/AR

MINING FUGITIVE EMISSIONS - CONTINUED **Model Scenario W3** DR **180,000 T/day Emissions**

HAP/TAP Emissions

Annual

		YPP_tpy	HFP_tpy	WEP_tpy	BT_tpy	YPPBL_tpy	HFPBL_tpy	WEPBL_tpy	BTBL_tpy	STKP_tpy	FDRSF_tpy	HFDRSF_tpy	YPDRSF_tpy	WEDRSF_tpy	HR000_tpy	CCRD, UGE	ton/yr
		YPP	HFP	WEP	BT	YPPBL	HFPBL	WEPBL	BTBL	STKP	FDRSF	HFDRSF	YPDRSF	WEDRSF	HR000	TSF, ACCRD, UGEXP	Total
CAS No.	Pollutant	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr
7440-38-2	Arsenic	0	0	0.230	0	0	0	0.078	0	0	0	0.035	0	0	2.033	4.6E-3	2.381
7440-41-7	Beryllium	0	0	1.1E-3	0	0	0	3.8E-4	0	0	0	1.7E-4	0	0	9.8E-3	2.2E-5	0.011
7440-43-9	Cadmium	0	0	1.7E-4	0	0	0	5.9E-5	0	0	0	2.6E-5	0	0	1.5E-3	3.5E-6	1.8E-3
7440-48-4	Cobalt	0	0	1.4E-3	0	0	0	4.7E-4	0	0	0	2.1E-4	0	0	0.012	2.8E-5	0.014
7440-47-3	Chromium	0	0	3.1E-3	0	0	0	1.1E-3	0	0	0	4.8E-4	0	0	0.027	6.3E-5	0.032
7439-97-6	Mercury	0	0	2.1E-4	0	0	0	7.0E-5	0	0	0	3.2E-5	0	0	1.8E-3	4.2E-6	2.1E-3
7439-96-5	Manganese	0	0	0.103	0	0	0	0.035	0	0	0	0.016	0	0	0.911	2.1E-3	1.067
7440-02-0	Nickel	0	0	6.9E-4	0	0	0	2.3E-4	0	0	0	1.1E-4	0	0	6.1E-3	1.4E-5	7.1E-3
7439-92-1	Lead	0	0	2.8E-3	0	0	0	9.4E-4	0	0	0	4.2E-4	0	0	0.024	5.6E-5	0.029
7440-36-0	Antimony	0	0	7.9E-3	0	0	0	2.7E-3	0	0	0	1.2E-3	0	0	0.070	1.6E-4	0.082
7723-14-0	Phosphorus	0	0	0.224	0	0	0	0.076	0	0	0	0.034	0	0	1.981	4.5E-3	2.320
7782-49-2	Selenium	0	0	1.4E-4	0	0	0	4.7E-5	0	0	0	2.1E-5	0	0	1.2E-3	2.8E-6	1.4E-3
7440-22-4	Silver	0	0	1.7E-4	0	0	0	5.9E-5	0	0	0	2.6E-5	0	0	1.5E-3	3.5E-6	1.8E-3
7429-90-5	Aluminum	0	0	24.463	0	0	0	8.332	0	0	0	3.756	0	0	216	0.494	253
7440-39-3	Barium	0	0	0.276	0	0	0	0.094	0	0	0	0.042	0	0	2.438	5.6E-3	2.855
1317-65-3	Calcium Ca	0	0	4.824	0	0	0	1.643	0	0	0	0.741	0	0	42.663	0.097	49.967
7440-50-8	Copper	0	0	1.7E-3	0	0	0	5.9E-4	0	0	0	2.6E-4	0	0	0.015	3.5E-5	0.018
7439-89-6	Iron	0	0	6.271	0	0	0	2.136	0	0	0	0.963	0	0	55.462	0.127	64.958
7439-98-7	Molybdenu	0	0	3.4E-4	0	0	0	1.2E-4	0	0	0	5.3E-5	0	0	3.0E-3	7.0E-6	3.6E-3
7440-28-0	Thallium	0	0	3.4E-3	0	0	0	1.2E-3	0	0	0	5.3E-4	0	0	0.030	7.0E-5	0.036
7440-61-1	Uranium	0	0	3.4E-3	0	0	0	1.2E-3	0	0	0	5.3E-4	0	0	0.030	7.0E-5	0.036
7440-62-2	Vanadium	0	0	9.6E-3	0	0	0	3.3E-3	0	0	0	1.5E-3	0	0	0.085	1.9E-4	0.100
7440-33-7	Tungsten	0	0	3.4E-3	0	0	0	1.2E-3	0	0	0	5.3E-4	0	0	0.030	7.0E-5	0.036
7440-66-6	Zinc	0	0	0.012	0	0	0	4.1E-3	0	0	0	1.9E-3	0	0	0.107	2.4E-4	0.125
Total		0	0	36.441	0	0	0	12.412	0	0	0	5.596	0	0	322	0.736	377
															chk	377.4900	377.4900

MINING FUGITIVE EMISSIONS - CONTINUED

Mercury Evaporative Flux Emissions

Fugitive Mercury Flux and Emissions

			Area		Hg Flux	Emissions[1] lb/hr	ton/yr	lb/yr
CAS No.	Pollutant	Source	m^2	ha	µg/m^2-yr			
		Stockpiles	52,623	5.3	556	7.37E-6	3.2E-5	6.5E-2
		Rock Dumps	2,063,990	206.4	76.2	3.96E-5	1.7E-4	0.35
		Tailings	1,338,158	133.8	2,144	7.22E-4	3.2E-3	6.32
		Pits	1,504,919	150.5	132.3	5.01E-5	2.2E-4	0.44
7439-97-6	Mercury					8.2E-4	3.6E-3	7.17

[1] *Hourly emissions based on:* 8,760 *hours per year of operation*

Fugitive Mercury Emission Factors

	Twin Creeks (TC)		Ore Hg Adjusted	Stibnite	
	Hg Flux [1]	Hg [2]	µg/m^2/yr	Hg Flux [3]	Hg [4]
Source	µg/m^2-yr	µg/g	TC	µg/m^2-yr	µg/g
Stockpiles	5,609	33	556	556	0.96
Rock Dumps	768	3.5	76.2	76.2	0.60
Tailings	21,621	33	2,144	2,144	0.96
Pits	1,334	9.5	132	132.3	0.60

[1] *(Eckley 2010)* *Table 1: Hg flux µg/m^2-yr*

[2] *(Eckley 2010)* *Table 1: Average Hg flux mg/g: " Stockpiles - high-grade stockpiles, Rock Dumps - waste rock dumps, Tailings - high-grade stockpiles as a surrogate; Pits - pit"*

[3] *(Eckley 2010)* *Figure 2: log(y) = m*log(x) + b*

y = Hg Flux (ng/m^2-d)
x = material Hg concentration (µg/g)]

Slope =	*Solar*	*TC*
	Low	*0.59*
	Medium	*0.6*
	High	*0.77*
	Average	*0.65*

[4] *(Midas Gold 2018e)*

Sample Calculation: m = log (y1/y2) / log(x1/x2)

m=	0.65	unitless
y1=	5,609	µg/m^2-yr
x1=	33	µg/m^2-yr
x2=	0.96	µg/m^2-yr
log(x1/x2)=	1.536243	unitless
log(y1/y2)=	1.003679	unitless
y1/y2=	10.08506	unitless
y2=	556.2	µg/m^2-yr

Conversions

2,000	lb/ton
10,000	m2/ha
453.593	g/lb

TABLE A-W3. HAP/TAP Emissions and Exemptions

180,000 T/day Emissions						MINING										LEACHING	
chk						*Mining*	*Model Scenario*	*W3*								*CN Leach/PAX*	
						YPP,HFP,WEP,BT	YPPBL,HFPBL,WEPBL,BTBL		HR000		STKP, FDRSF, HFDRSF, YPDRSF, WEDRSF		TSF,ACCRD,UGEXP			
CAS	HAP/TAP	HAP	TAP			Pits		Blasting		Haul Roads		Stockpiles and DRFS		Tails, Access Road, Exploration		CN Leach and PAX	
	NSPS or NESHAP HAP/TAP -->			*Y*													
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				A/C	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
106-99-0	1,3-Butadiene	Y	Y	Y	C				0	0	0		0				
91-57-6	2-Methylnaphthalene	Y	N	n/a								0					
56-49-5	3-Methylchloranthrene	Y	Y	Y	C												
57-97-6	7,12-Dimethylbenz(a)anthracene	Y	N	n/a													
83-32-9	Acenaphthene	Y	N	n/a													
208-96-8	Acenaphthylene	Y	N	n/a													
75-07-0	Acetaldehyde	Y	Y	Y	C												
107-02-8	Acrolein	Y	Y	Y	A												
120-12-7	Anthracene	Y	N	n/a													
7440-36-0	Antimony	Y	Y	Y	A	1.8E-3	7.9E-3	6.2E-4	2.7E-3	0.016	0.070	2.8E-4	1.2E-3	3.7E-5	1.6E-4		
7440-38-2	Arsenic	Y	Y	Y	C	0.052	0.230	0.018	0.078	0.464	2.033	8.1E-3	0.035	1.1E-3	4.6E-3		
71-43-2	Benzene	Y	Y	Y	C												
50-32-8	Benzo(a)pyrene	Y	Y	Y	C												
56-55-3	Benz(a)anthracene	Y	Y	Y	C												
205-99-2	Benzo(b)fluoranthene	Y	Y	Y	C												
207-08-9	Benzo(k)fluoranthene	Y	Y	Y	C												
218-01-9	Chrysene	Y	Y	Y	C												
53-70-3	Dibenzo(a,h)anthracene	Y	Y	Y	C												
193-39-5	Indeno(1,2,3-cd)pyrene	Y	Y	Y	C												
191-24-2	Benzo(g,h,i)perylene	Y	N	n/a													
7440-41-7	Beryllium	Y	Y	Y	C	2.5E-4	1.1E-3	8.6E-5	3.8E-4	2.2E-3	9.8E-3	3.9E-5	1.7E-4	5.1E-6	2.2E-5		
92-52-4	Biphenyl	Y	Y	Y	A												
7440-43-9	Cadmium	Y	Y	Y	C	3.9E-5	1.7E-4	1.3E-5	5.9E-5	3.5E-4	1.5E-3	6.0E-6	2.6E-5	7.9E-7	3.5E-6		
75-15-0	Carbon Disulfide	Y	Y	Y	A											0.014	0.063
7440-47-3	Chromium	Y	Y	Y	A	7.1E-4	3.1E-3	2.4E-4	1.1E-3	6.3E-3	0.027	1.1E-4	4.8E-4	1.4E-5	6.3E-5		
18540-29-9	Cr (VI)	Y	Y	Y	C												
7440-48-4	Cobalt	Y	Y	Y	A	3.1E-4	1.4E-3	1.1E-4	4.7E-4	2.8E-3	0.012	4.8E-5	2.1E-4	6.4E-6	2.8E-5		
592-01-8	Cyanide	Y	Y	Y	A											0.453	1.983
106-46-7	Dichlorobenzene	Y	Y	Y	A												
206-44-0	Fluoranthene	Y	N	n/a													
86-73-7	Fluorene	Y	N	n/a													
50-00-0	Formaldehyde	Y	Y	Y	C												
110-54-3	Hexane	Y	Y	Y	A												
7647-01-0	Hydrogen Chloride	Y	Y	Y	A												
7439-92-1	Lead	Y	N	n/a		6.3E-4	2.8E-3	2.1E-4	9.4E-4	5.6E-3	0.024	9.7E-5	4.2E-4	1.3E-5	5.6E-5		
7439-96-5	Manganese	Y	Y	Y	A	0.024	0.103	8.0E-3	0.035	0.208	0.911	3.6E-3	0.016	4.7E-4	2.1E-3		
7439-97-6	Mercury	Y	N	n/a		9.7E-5	4.3E-4	1.6E-5	7.0E-5	4.2E-4	1.8E-3	5.4E-5	2.4E-4	7.2E-4	3.2E-3		
91-20-3	Naphthalene	Y	Y	Y	A												
7440-02-0	Nickel	Y	Y	Y	C	1.6E-4	6.9E-4	5.4E-5	2.3E-4	1.4E-3	6.1E-3	2.4E-5	1.1E-4	3.2E-6	1.4E-5		
85-01-8	Phenanthrene	Y	N	n/a													
108-95-2	Phenol	Y	Y	Y	A												
7723-14-0	Phosphorus	Y	Y	Y	A	0.051	0.224	0.017	0.076	0.452	1.981	7.9E-3	0.034	1.0E-3	4.5E-3		
129-00-0	Pyrene	Y	N	n/a													
7782-49-2	Selenium	Y	Y	Y	A	3.1E-5	1.4E-4	1.1E-5	4.7E-5	2.8E-4	1.2E-3	4.8E-6	2.1E-5	6.4E-7	2.8E-6		
108-88-3	Toluene	Y	Y	Y	A												
1330-20-7	Xylene	Y	Y	Y	A												
7429-90-5	Aluminum	N	Y	N	A	5.585	24.463	1.902	8.332	49.397	216	0.858	3.756	0.113	0.494		
7440-39-3	Barium	N	Y	N	A	0.063	0.276	0.021	0.094	0.557	2.438	9.7E-3	0.042	1.3E-3	5.6E-3		
1317-65-3	Calcium Carbonate	N	Y	N	A	1.101	4.824	0.375	1.643	9.740	42.663	0.169	0.741	0.022	0.097		
1305-78-8	Calcium Oxide	N	Y	N	A												
7440-50-8	Copper	N	Y	N	A	3.9E-4	1.7E-3	1.3E-4	5.9E-4	3.5E-3	0.015	6.0E-5	2.6E-4	7.9E-6	3.5E-5		
110-82-7	Cyclohexane	N	Y	N	A												
7783-06-4	Hydrogen Sulfide	N	Y	N	A												
7439-89-6	Iron	N	Y	N	A	1.432	6.271	0.488	2.136	12.662	55.462	0.220	0.963	0.029	0.127		
7439-98-7	Molybdenum	N	Y	N	A	7.9E-5	3.4E-4	2.7E-5	1.2E-4	7.0E-4	3.0E-3	1.2E-5	5.3E-5	1.6E-6	7.0E-6		
109-66-0	Pentane	N	Y	N	A												
7440-22-4	Silver	N	Y	N	A	3.9E-5	1.7E-4	1.3E-5	5.9E-5	3.5E-4	1.5E-3	6.0E-6	2.6E-5	7.9E-7	3.5E-6		
7664-93-9	Sulfuric Acid	N	Y	N	A												
7440-28-0	Thallium	N	Y	N	A	7.9E-4	3.4E-3	2.7E-4	1.2E-3	7.0E-3	0.030	1.2E-4	5.3E-4	1.6E-5	7.0E-5		
7440-61-1	Uranium	N	Y	N	A	7.9E-4	3.4E-3	2.7E-4	1.2E-3	7.0E-3	0.030	1.2E-4	5.3E-4	1.6E-5	7.0E-5		
7440-62-2	Vanadium	N	Y	N	A	2.2E-3	9.6E-3	7.5E-4	3.3E-3	0.019	0.085	3.4E-4	1.5E-3	4.4E-5	1.9E-4		
25551-13-7	Trimethyl benzene	N	Y	N	A												
7440-33-7	Tungsten	N	Y	N	A	7.9E-4	3.4E-3	2.7E-4	1.2E-3	7.0E-3	0.030	1.2E-4	5.3E-4	1.6E-5	7.0E-5		
7440-66-6	Zinc	N	Y	N	A	2.8E-3	0.012	9.4E-4	4.1E-3	0.024	0.107	4.2E-4	1.9E-3	5.6E-5	2.4E-4		
HAP TOTAL						***0.131***	***0.574***	***0.045***	***0.196***	***1.160***	***5.079***	***0.020***	***0.088***	***3.4E-3***	***0.015***	***0.467***	***2.046***
MERCURY TOTAL (exempt)						***9.7E-5***	***4.3E-4***	***1.6E-5***	***7.0E-5***	***4.2E-4***	***1.8E-3***	***5.4E-5***	***2.4E-4***	***7.2E-4***	***3.2E-3***		
MERCURY TOTAL (non-exempt)																	
TAP TOTAL (HAP-TAP addressed by NSPS/NESHAP)																	
TAP TOTAL (For EL Evaluation)						***8.319***	***36.438***	***2.834***	***12.411***	***73.580***	***322***	***1.278***	***5.595***	***0.168***	***0.735***	***0.467***	***2.046***

TABLE A-W3. HAP/TAP Emissions and Exemptions

180,000 T/day Emissions

chk

						0	0	0	0	1	1	1	1	0	0	1	1
						PROCESSING AND PRODUCTION											
						Ore Processing				*Ore Concentration and Refining*				*Process Heating*			
						OC1-13		PS		AC		EW,MR,MF,CKD		ACB, CKB, PV, HS		LKC	
CAS	HAP/TAP	HAP	TAP			Crushers & Xfers		Prill Silos		Autoclave		EW, Preg Tank, Retort, Furnace, Carbon Kiln		POX Boiler, C. Kiln Comb., Prop. Vap., Sol'n Heater		Lime Kiln Combustion	
	NSPS or NESHAP HAP/TAP -->			*Y*		*LL*	*LL*			*7E*	*7E*	*7E*	*7E*			*5A*	*5A*
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
106-99-0	1,3-Butadiene	Y	Y	Y	C												
91-57-6	2-Methylnaphthalene	Y	N	n/a										1.9E-7	7.6E-7	5.2E-7	1.9E-6
56-49-5	3-Methylchloranthrene	Y	Y	Y	C									1.3E-8	5.7E-8	3.3E-8	1.4E-7
57-97-6	7,12-Dimethylbenz(a)anthracene	Y	N	n/a										1.3E-7	5.1E-7	3.5E-7	1.3E-6
83-32-9	Acenaphthene	Y	N	n/a										1.4E-8	5.7E-8	3.9E-8	1.4E-7
208-96-8	Acenaphthylene	Y	N	n/a										1.4E-8	5.7E-8	3.9E-8	1.4E-7
75-07-0	Acetaldehyde	Y	Y	Y	C												
107-02-8	Acrolein	Y	Y	Y	A												
120-12-7	Anthracene	Y	N	n/a										1.9E-8	7.6E-8	5.2E-8	1.9E-7
7440-36-0	Antimony	Y	Y	Y	A	1.4E-4	5.9E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7440-38-2	Arsenic	Y	Y	Y	C	3.9E-3	0.017			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.5E-6	6.4E-6	3.7E-6	1.6E-5
71-43-2	Benzene	Y	Y	Y	C									1.5E-5	6.7E-5	3.9E-5	1.7E-4
50-32-8	Benzo(a)pyrene	Y	Y	Y	C									8.7E-9	3.8E-8	2.2E-8	9.6E-8
56-55-3	Benz(a)anthracene	Y	Y	Y	C									1.3E-8	5.7E-8	3.3E-8	1.4E-7
205-99-2	Benzo(b)fluoranthene	Y	Y	Y	C									1.3E-8	5.7E-8	3.3E-8	1.4E-7
207-08-9	Benzo(k)fluoranthene	Y	Y	Y	C									1.3E-8	5.7E-8	3.3E-8	1.4E-7
218-01-9	Chrysene	Y	Y	Y	C									1.3E-8	5.7E-8	3.3E-8	1.4E-7
53-70-3	Dibenzo(a,h)anthracene	Y	Y	Y	C									8.7E-9	3.8E-8	2.2E-8	9.6E-8
193-39-5	Indeno(1,2,3-cd)pyrene	Y	Y	Y	C									1.3E-8	5.7E-8	3.3E-8	1.4E-7
191-24-2	Benzo(g,h,i)perylene	Y	N	n/a										9.5E-9	3.8E-8	2.6E-8	9.6E-8
7440-41-7	Beryllium	Y	Y	Y	C	1.9E-5	8.2E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	8.7E-8	3.8E-7	2.2E-7	9.6E-7
92-52-4	Biphenyl	Y	Y	Y	A												
7440-43-9	Cadmium	Y	Y	Y	C	2.9E-6	1.3E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	8.0E-6	3.5E-5	2.0E-5	8.8E-5
75-15-0	Carbon Disulfide	Y	Y	Y	A												
7440-47-3	Chromium	Y	Y	Y	A	5.3E-5	2.3E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.1E-5	4.5E-5	3.0E-5	1.1E-4
18540-29-9	Cr (VI)	Y	Y	Y	C												
7440-48-4	Cobalt	Y	Y	Y	A	2.4E-5	1.0E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3	6.6E-7	2.7E-6	1.8E-6	6.8E-6
592-01-8	Cyanide	Y	Y	Y	A							1.2E-3	5.3E-3				
106-46-7	Dichlorobenzene	Y	Y	Y	A									9.5E-6	3.8E-5	2.6E-5	9.6E-5
206-44-0	Fluoranthene	Y	N	n/a										2.4E-8	9.5E-8	6.5E-8	2.4E-7
86-73-7	Fluorene	Y	N	n/a										2.2E-8	8.9E-8	6.1E-8	2.3E-7
50-00-0	Formaldehyde	Y	Y	Y	C									5.5E-4	2.4E-3	1.4E-3	6.0E-3
110-54-3	Hexane	Y	Y	Y	A									0.014	0.057	0.039	0.145
7647-01-0	Hydrogen Chloride	Y	Y	Y	A												
7439-92-1	Lead	Y	N	n/a		4.7E-5	2.1E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7439-96-5	Manganese	Y	Y	Y	A	1.8E-3	7.7E-3			2.3E-5	1.0E-4	3.8E-4	1.7E-3	3.0E-6	1.2E-5	8.2E-6	3.1E-5
7439-97-6	Mercury	Y	N	n/a		5.6E-6	2.5E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	2.1E-6	8.3E-6	5.6E-6	2.1E-5
91-20-3	Naphthalene	Y	Y	Y	A									4.8E-6	1.9E-5	1.3E-5	4.9E-5
7440-02-0	Nickel	Y	Y	Y	C	1.2E-5	5.2E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.5E-5	6.7E-5	3.9E-5	1.7E-4
85-01-8	Phenanthrene	Y	N	n/a										1.3E-7	5.4E-7	3.7E-7	1.4E-6
108-95-2	Phenol	Y	Y	Y	A												
7723-14-0	Phosphorus	Y	Y	Y	A	3.8E-3	0.017			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
129-00-0	Pyrene	Y	N	n/a										4.0E-8	1.6E-7	1.1E-7	4.0E-7
7782-49-2	Selenium	Y	Y	Y	A	2.4E-6	1.0E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.9E-7	7.6E-7	5.2E-7	1.9E-6
108-88-3	Toluene	Y	Y	Y	A									2.7E-5	1.1E-4	7.3E-5	2.7E-4
1330-20-7	Xylene	Y	Y	Y	A												
7429-90-5	Aluminum	N	Y	N	A	0.418	1.829			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7440-39-3	Barium	N	Y	N	A	4.7E-3	0.021			2.3E-5	1.0E-4	3.8E-4	1.7E-3	3.5E-5	1.4E-4	9.5E-5	3.5E-4
1317-65-3	Calcium Carbonate	N	Y	N	A	0.082	0.361			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
1305-78-8	Calcium Oxide	N	Y	N	A												
7440-50-8	Copper	N	Y	N	A	2.9E-5	1.3E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3	6.7E-6	2.7E-5	1.8E-5	6.8E-5
110-82-7	Cyclohexane	N	Y	N	A												
7783-06-4	Hydrogen Sulfide	N	Y	N	A					0.900	3.942						
7439-89-6	Iron	N	Y	N	A	0.107	0.469			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7439-98-7	Molybdenum	N	Y	N	A	5.9E-6	2.6E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	8.7E-6	3.5E-5	2.4E-5	8.8E-5
109-66-0	Pentane	N	Y	N	A									0.021	0.083	0.056	0.209
7440-22-4	Silver	N	Y	N	A	2.9E-6	1.3E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7664-93-9	Sulfuric Acid	N	Y	N	A					2.030	8.891						
7440-28-0	Thallium	N	Y	N	A	5.9E-5	2.6E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7440-61-1	Uranium	N	Y	N	A	5.9E-5	2.6E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7440-62-2	Vanadium	N	Y	N	A	1.6E-4	7.2E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.8E-5	7.3E-5	5.0E-5	1.8E-4
25551-13-7	Trimethyl benzene	N	Y	N	A												
7440-33-7	Tungsten	N	Y	N	A	5.9E-5	2.6E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3				
7440-66-6	Zinc	N	Y	N	A	2.1E-4	9.0E-4			2.3E-5	1.0E-4	3.8E-4	1.7E-3	2.3E-4	9.2E-4	6.3E-4	2.3E-3
HAP TOTAL						***9.8E-3***	***0.043***			***2.8E-4***	***1.2E-3***	***5.8E-3***	***0.025***	***0.015***	***0.060***	***0.041***	***0.152***
MERCURY TOTAL (exempt)										***2.3E-5***	***1.0E-4***	***3.8E-4***	***1.7E-3***			***5.6E-6***	***2.1E-5***
MERCURY TOTAL (non-exempt)						***5.6E-6***	***2.5E-5***							***2.1E-6***	***8.3E-6***		
TAP TOTAL (HAP-TAP addressed by NSPS/NESHAP)						***9.8E-3***	***0.043***			***2.3E-4***	***1.0E-3***	***5.0E-3***	***0.022***			***0.041***	***0.152***
TAP TOTAL (For EL Evaluation)						***0.612***	***2.682***			***2.930***	***12.835***	***4.6E-3***	***0.020***	***0.036***	***0.144***	***0.057***	***0.212***

TABLE A-W3. HAP/TAP Emissions and Exemptions

180,000 T/day Emissions						PROCESSING AND PRODUCTION - Continued													
chk						*Lime Production*						*Aggregate Prod.*		*Concrete Production*					
CAS	HAP/TAP	HAP	TAP			LS1-11,LSBM		LK,LS12,LCR,LS-L/U		LS1-L/U,MillS2-L/U,ACS1-4		PCSP1,PCSP2		CM		CS1L,CS1U,CS2L, CS2U		CA-L/U	
						Limestone Crushers, Screens, Mill, Xfers		Lime Kiln, Kiln Feed, Lime Mill, Pebble Lime Silo		Lime Silos and Lime Mill Crushing		Portable Crushers, Screens, Xfers		Central Mixer		Cement Silo #1 and #2 L/U		Aggregate Bin	
	NSPS or NESHAP HAP/TAP -->			*Y*		*OOO*	*OOO*	*5A*	*5A*			*OOO*	*OOO*					*OOO*	*OOO*
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
106-99-0	1,3-Butadiene	Y	Y	Y	C														
91-57-6	2-Methylnaphthalene	Y	N	n/a															
56-49-5	3-Methylchloranthrene	Y	Y	Y	C														
57-97-6	7,12-Dimethylbenz(a)anthracene	Y	N	n/a															
83-32-9	Acenaphthene	Y	N	n/a															
208-96-8	Acenaphthylene	Y	N	n/a															
75-07-0	Acetaldehyde	Y	Y	Y	C														
107-02-8	Acrolein	Y	Y	Y	A														
120-12-7	Anthracene	Y	N	n/a															
7440-36-0	Antimony	Y	Y	Y	A	1.4E-5	4.8E-5	3.1E-6	1.2E-5	1.6E-6	5.1E-7	3.1E-6	1.4E-5					3.5E-6	8.6E-6
7440-38-2	Arsenic	Y	Y	Y	C	1.0E-4	4.4E-4	2.4E-5	1.1E-4	1.1E-6	4.7E-6	2.9E-5	1.3E-4	2.0E-6	8.9E-6	1.2E-7	5.1E-7	1.8E-5	7.9E-5
71-43-2	Benzene	Y	Y	Y	C														
50-32-8	Benzo(a)pyrene	Y	Y	Y	C														
56-55-3	Benz(a)anthracene	Y	Y	Y	C														
205-99-2	Benzo(b)fluoranthene	Y	Y	Y	C														
207-08-9	Benzo(k)fluoranthene	Y	Y	Y	C														
218-01-9	Chrysene	Y	Y	Y	C														
53-70-3	Dibenzo(a,h)anthracene	Y	Y	Y	C														
193-39-5	Indeno(1,2,3-cd)pyrene	Y	Y	Y	C														
191-24-2	Benzo(g,h,i)perylene	Y	N	n/a															
7440-41-7	Beryllium	Y	Y	Y	C	3.5E-6	1.5E-5	8.4E-7	3.7E-6	3.7E-8	1.6E-7	1.0E-6	4.4E-6			1.3E-8	5.8E-8	6.3E-7	2.8E-6
92-52-4	Biphenyl	Y	Y	Y	A														
7440-43-9	Cadmium	Y	Y	Y	C	1.1E-6	4.8E-6	2.6E-7	1.2E-6	1.2E-8	5.1E-8	3.1E-7	1.4E-6	4.9E-9	2.1E-8			2.0E-7	8.6E-7
75-15-0	Carbon Disulfide	Y	Y	Y	A														
7440-47-3	Chromium	Y	Y	Y	A	8.5E-5	2.9E-4	1.9E-5	6.9E-5	9.7E-6	3.0E-6	1.9E-5	8.2E-5	8.7E-7	3.8E-6	7.9E-7	3.5E-6	2.1E-5	5.2E-5
18540-29-9	Cr (VI)	Y	Y	Y	C									1.9E-7	8.1E-7	1.6E-7	7.0E-7		
7440-48-4	Cobalt	Y	Y	Y	A	2.3E-5	7.7E-5	5.0E-6	1.8E-5	2.6E-6	8.1E-7	5.0E-6	2.2E-5					5.5E-6	1.4E-5
592-01-8	Cyanide	Y	Y	Y	A														
106-46-7	Dichlorobenzene	Y	Y	Y	A														
206-44-0	Fluoranthene	Y	N	n/a															
86-73-7	Fluorene	Y	N	n/a															
50-00-0	Formaldehyde	Y	Y	Y	C														
110-54-3	Hexane	Y	Y	Y	A														
7647-01-0	Hydrogen Chloride	Y	Y	Y	A	0	0	0.986	3.666										
7439-92-1	Lead	Y	N	n/a		1.7E-5	5.8E-5	3.7E-6	1.4E-5	1.9E-6	6.1E-7	3.8E-6	1.6E-5	2.5E-7	1.1E-6	3.0E-7	1.3E-6	4.1E-6	1.0E-5
7439-96-5	Manganese	Y	Y	Y	A	1.3E-3	4.6E-3	2.9E-4	1.1E-3	1.5E-4	4.8E-5	3.0E-4	1.3E-3	2.6E-5	1.1E-4	3.2E-6	1.4E-5	3.3E-4	8.2E-4
7439-97-6	Mercury	Y	N	n/a		1.1E-7	3.9E-7	2.8E-4	1.0E-3	1.3E-8	4.1E-9	2.5E-8	1.1E-7					2.8E-8	6.9E-8
91-20-3	Naphthalene	Y	Y	Y	A														
7440-02-0	Nickel	Y	Y	Y	C	2.2E-5	9.6E-5	5.3E-6	2.3E-5	2.3E-7	1.0E-6	6.3E-6	2.7E-5	1.7E-6	7.4E-6	1.1E-6	5.0E-6	3.9E-6	1.7E-5
85-01-8	Phenanthrene	Y	N	n/a															
108-95-2	Phenol	Y	Y	Y	A														
7723-14-0	Phosphorus	Y	Y	Y	A	7.4E-4	2.5E-3	1.6E-4	6.0E-4	8.4E-5	2.6E-5	1.6E-4	7.1E-4	8.2E-6	3.6E-5			1.8E-4	4.5E-4
129-00-0	Pyrene	Y	N	n/a															
7782-49-2	Selenium	Y	Y	Y	A														
108-88-3	Toluene	Y	Y	Y	A														
1330-20-7	Xylene	Y	Y	Y	A														
7429-90-5	Aluminum	N	Y	N	A	0.128	0.436	0.028	0.104	0.015	4.6E-3	0.028	0.124					0.031	0.078
7440-39-3	Barium	N	Y	N	A	8.2E-4	2.8E-3	1.8E-4	6.7E-4	9.4E-5	2.9E-5	1.8E-4	7.9E-4					2.0E-4	5.0E-4
1317-65-3	Calcium Carbonate	N	Y	N	A	1.558	5.291	0.260	0.969			0.343	1.503						
1305-78-8	Calcium Oxide	N	Y	N	A			0.216	0.802	0.480	0.150								
7440-50-8	Copper	N	Y	N	A	2.8E-5	9.6E-5	6.2E-6	2.3E-5	3.2E-6	1.0E-6	6.3E-6	2.7E-5					6.9E-6	1.7E-5
110-82-7	Cyclohexane	N	Y	N	A														
7783-06-4	Hydrogen Sulfide	N	Y	N	A														
7439-89-6	Iron	N	Y	N	A	0.059	0.199	0.013	0.048	6.7E-3	2.1E-3	0.013	0.057					0.014	0.036
7439-98-7	Molybdenum	N	Y	N	A	2.8E-6	9.6E-6	6.2E-7	2.3E-6	3.2E-7	1.0E-7	6.3E-7	2.7E-6					6.9E-7	1.7E-6
109-66-0	Pentane	N	Y	N	A														
7440-22-4	Silver	N	Y	N	A	0	0												
7664-93-9	Sulfuric Acid	N	Y	N	A														
7440-28-0	Thallium	N	Y	N	A	2.8E-5	9.6E-5	6.2E-6	2.3E-5	3.2E-6	1.0E-6	6.3E-6	2.7E-5					6.9E-6	1.7E-5
7440-61-1	Uranium	N	Y	N	A	2.8E-5	9.6E-5	6.2E-6	2.3E-5	3.2E-6	1.0E-6	6.3E-6	2.7E-5					6.9E-6	1.7E-5
7440-62-2	Vanadium	N	Y	N	A	8.8E-5	3.0E-4	1.9E-5	7.1E-5	1.0E-5	3.1E-6	1.9E-5	8.5E-5					2.1E-5	5.3E-5
25551-13-7	Trimethyl benzene	N	Y	N	A														
7440-33-7	Tungsten	N	Y	N	A	2.8E-5	9.6E-5	6.2E-6	2.3E-5	3.2E-6	1.0E-6	6.3E-6	2.7E-5					6.9E-6	1.7E-5
7440-66-6	Zinc	N	Y	N	A	1.0E-4	3.5E-4	2.2E-5	8.3E-5	1.2E-5	3.6E-6	2.3E-5	9.9E-5					2.5E-5	6.2E-5
HAP TOTAL						***2.3E-3***	***8.1E-3***	***0.987***	***3.669***	***2.6E-4***	***8.5E-5***	***5.3E-4***	***2.3E-3***	***3.9E-5***	***1.7E-4***	***5.7E-6***	***2.5E-5***	***5.6E-4***	***1.4E-3***
MERCURY TOTAL (exempt)						***0***	***0***	***2.8E-4***	***1.0E-3***										
MERCURY TOTAL (non-exempt)						***1.1E-7***	***3.9E-7***			***1.3E-8***	***4.1E-9***	***2.5E-8***	***1.1E-7***					***2.8E-8***	***6.9E-8***
TAP TOTAL (HAP-TAP addressed by NSPS/NESHAP)						***2.3E-3***	***8.0E-3***	***0.986***	***3.668***			***5.2E-4***	***2.3E-3***					***5.6E-4***	***1.4E-3***
TAP TOTAL (For EL Evaluation)						***1.746***	***5.930***	***0.517***	***1.923***	***0.502***	***0.157***	***0.385***	***1.684***	***3.9E-5***	***1.7E-4***	***5.4E-6***	***2.4E-5***	***0.046***	***0.114***

TABLE A-W3. HAP/TAP Emissions and Exemptions

180,000 T/day Emissions						PROCESSING AND PRODUCTION - Continued						MINING and LEACHING - Totals									
chk						*HVAC*		*Emer. Power/Fire*		*Fuel Storage*		*HAP Total*		*Mercury Total*		*Mercury Total*		*TAP Total*		*TAP Total*	
						H1M,H2M,HM,HAC,HR,HA,HMO,HTS,HW		EDG1,EDG2,EDG3,EDFP		TG1,TG2				*Exempt*		*Non-Exempt*		*HAP-TAP addressed by NSPS/NESHAP*		*For EL Evaluation*	
CAS	HAP/TAP	HAP	TAP			Heaters		Emergency Generators and Fire Pump		Gasoline Fuel Tanks											
	NSPS or NESHAP HAP/TAP -->		*Y*					*4Z*	*4Z*	*6C*	*6C*										
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
106-99-0	1,3-Butadiene	Y	Y	Y	C			8.4E-7	3.7E-6			0	0					0	0	0	0
91-57-6	2-Methylnaphthalene	Y	N	n/a		4.3E-7	1.9E-6														
56-49-5	3-Methylchloranthrene	Y	Y	Y	C	3.2E-8	1.4E-7														
57-97-6	7,12-Dimethylbenz(a)anthracene	Y	N	n/a		2.9E-7	1.3E-6														
83-32-9	Acenaphthene	Y	N	n/a		3.2E-8	1.4E-7	5.6E-6	6.7E-6												
208-96-8	Acenaphthylene	Y	N	n/a		3.2E-8	1.4E-7	1.1E-5	1.3E-5												
75-07-0	Acetaldehyde	Y	Y	Y	C			2.5E-5	1.1E-4												
107-02-8	Acrolein	Y	Y	Y	A			1.6E-5	2.0E-5												
120-12-7	Anthracene	Y	N	n/a		4.3E-8	1.9E-7	1.6E-6	1.9E-6												
7440-36-0	Antimony	Y	Y	Y	A							0.019	0.082							0.019	0.082
7440-38-2	Arsenic	Y	Y	Y	C	3.6E-6	1.6E-5					0.544	2.381							0.544	2.381
71-43-2	Benzene	Y	Y	Y	C	3.8E-5	1.6E-4	2.7E-4	1.2E-3	7.0E-3	0.031										
50-32-8	Benzo(a)pyrene	Y	Y	Y	C	2.1E-8	9.4E-8	8.7E-8	3.8E-7												
56-55-3	Benz(a)anthracene	Y	Y	Y	C	3.2E-8	1.4E-7	2.4E-7	1.0E-6												
205-99-2	Benzo(b)fluoranthene	Y	Y	Y	C	3.2E-8	1.4E-7	3.6E-7	1.6E-6												
207-08-9	Benzo(k)fluoranthene	Y	Y	Y	C	3.2E-8	1.4E-7	7.3E-8	3.2E-7												
218-01-9	Chrysene	Y	Y	Y	C	3.2E-8	1.4E-7	5.0E-7	2.2E-6												
53-70-3	Dibenzo(a,h)anthracene	Y	Y	Y	C	2.1E-8	9.4E-8	1.2E-7	5.4E-7												
193-39-5	Indeno(1,2,3-cd)pyrene	Y	Y	Y	C	3.2E-8	1.4E-7	1.4E-7	6.2E-7												
191-24-2	Benzo(g,h,i)perylene	Y	N	n/a		2.1E-8	9.4E-8	6.9E-7	8.3E-7												
7440-41-7	Beryllium	Y	Y	Y	C	2.1E-7	9.4E-7					2.6E-3	0.011							2.6E-3	0.011
92-52-4	Biphenyl	Y	Y	Y	A					4.4E-5	1.9E-4										
7440-43-9	Cadmium	Y	Y	Y	C	2.0E-5	8.6E-5					4.1E-4	1.8E-3							4.1E-4	1.8E-3
75-15-0	Carbon Disulfide	Y	Y	Y	A							0.014	0.063							0.014	0.063
7440-47-3	Chromium	Y	Y	Y	A	2.5E-5	1.1E-4					7.3E-3	0.032							7.3E-3	0.032
18540-29-9	Cr (VI)	Y	Y	Y	C																
7440-48-4	Cobalt	Y	Y	Y	A	1.5E-6	6.6E-6					3.3E-3	0.014							3.3E-3	0.014
592-01-8	Cyanide	Y	Y	Y	A							0.453	1.983							0.453	1.983
106-46-7	Dichlorobenzene	Y	Y	Y	A	2.1E-5	9.4E-5														
206-44-0	Fluoranthene	Y	N	n/a		5.4E-8	2.4E-7	5.3E-6	6.4E-6												
86-73-7	Fluorene	Y	N	n/a		5.0E-8	2.2E-7	1.7E-5	2.1E-5												
50-00-0	Formaldehyde	Y	Y	Y	C	1.3E-3	5.9E-3	5.1E-5	2.2E-4												
110-54-3	Hexane	Y	Y	Y	A	0.032	0.141			0.031	0.137										
7647-01-0	Hydrogen Chloride	Y	Y	Y	A																
7439-92-1	Lead	Y	N	n/a								6.5E-3	0.029								
7439-96-5	Manganese	Y	Y	Y	A	6.8E-6	3.0E-5					0.244	1.067							0.244	1.067
7439-97-6	Mercury	Y	N	n/a		4.7E-6	2.0E-5					1.3E-3	5.7E-3	1.3E-3	5.7E-3	0	0	0	0	0	0
91-20-3	Naphthalene	Y	Y	Y	A	1.1E-5	4.8E-5	1.6E-4	1.9E-4	1.9E-3	8.5E-3	0	0					0	0	0	0
7440-02-0	Nickel	Y	Y	Y	C	3.8E-5	1.6E-4					1.6E-3	7.1E-3					0	0	1.6E-3	7.1E-3
85-01-8	Phenanthrene	Y	N	n/a		3.0E-7	1.3E-6	5.0E-5	6.0E-5			0	0					0	0	0	0
108-95-2	Phenol	Y	Y	Y	A					2.4E-4	1.1E-3	0	0					0	0	0	0
7723-14-0	Phosphorus	Y	Y	Y	A							0.530	2.320					0	0	0.530	2.320
129-00-0	Pyrene	Y	N	n/a		8.9E-8	3.9E-7	4.7E-6	5.7E-6			0	0					0	0	0	0
7782-49-2	Selenium	Y	Y	Y	A	4.3E-7	1.9E-6					3.3E-4	1.4E-3					0	0	3.3E-4	1.4E-3
108-88-3	Toluene	Y	Y	Y	A	6.1E-5	2.7E-4	3.6E-4	4.3E-4	0.032	0.138	0	0					0	0	0	0
1330-20-7	Xylene	Y	Y	Y	A			2.5E-4	3.0E-4	0.031	0.137	0	0					0	0	0	0
7429-90-5	Aluminum	N	Y	N	A							0	0					0	0	57.855	253
7440-39-3	Barium	N	Y	N	A	7.9E-5	3.4E-4					0	0					0	0	0.652	2.855
1317-65-3	Calcium Carbonate	N	Y	N	A							0	0					0	0	11.408	49.967
1305-78-8	Calcium Oxide	N	Y	N	A							0	0					0	0	0	0
7440-50-8	Copper	N	Y	N	A	1.5E-5	6.7E-5					0	0					0	0	4.1E-3	0.018
110-82-7	Cyclohexane	N	Y	N	A					1.0E-3	4.6E-3	0	0					0	0	0	0
7783-06-4	Hydrogen Sulfide	N	Y	N	A							0	0					0	0	0	0
7439-89-6	Iron	N	Y	N	A							0	0					0	0	14.831	64.958
7439-98-7	Molybdenum	N	Y	N	A	2.0E-5	8.6E-5					0	0					0	0	8.1E-4	3.6E-3
109-66-0	Pentane	N	Y	N	A	0.047	0.204					0	0					0	0	0	0
7440-22-4	Silver	N	Y	N	A							0	0					0	0	4.1E-4	1.8E-3
7664-93-9	Sulfuric Acid	N	Y	N	A							0	0					0	0	0	0
7440-28-0	Thallium	N	Y	N	A							0	0					0	0	8.1E-3	0.036
7440-61-1	Uranium	N	Y	N	A							0	0					0	0	8.1E-3	0.036
7440-62-2	Vanadium	N	Y	N	A	4.1E-5	1.8E-4					0	0					0	0	0.023	0.100
25551-13-7	Trimethyl benzene	N	Y	N	A					0.011	0.048	0	0					0	0	0	0
7440-33-7	Tungsten	N	Y	N	A							0	0					0	0	8.1E-3	0.036
7440-66-6	Zinc	N	Y	N	A	5.2E-4	2.3E-3					0	0					0	0	0.029	0.125
HAP TOTAL						***0.034***	***0.148***	***1.2E-3***	***2.6E-3***	***0.103***	***0.453***	***1.826***	***7.998***								
MERCURY TOTAL (exempt)														***1.3E-3***	***5.7E-3***						
MERCURY TOTAL (non-exempt)						***4.7E-6***	***2.0E-5***									***0***	***0***				
TAP TOTAL (HAP-TAP addressed by NSPS/NESHAP)								***1.1E-3***	***2.5E-3***	***0.103***	***0.453***							***0***	***0***		
TAP TOTAL (For EL Evaluation)						***0.081***	***0.355***			***0.012***	***0.052***									***86.645***	***380***

TABLE A-W3. HAP/TAP Emissions and Exemptions

180,000 T/day Emissions						PROCESSING AND PRODUCTION - Totals										ALL	ALL	ALL	TAP EL	
chk						*HAP Total*		*Mercury Total Exempt*		*Mercury Total Non-Exempt*		*TAP Total HAP-TAP addressed by NSPS/NESHAP*		*TAP Total For EL Evaluation*		*HAP*	*Hg Non-Exempt*	*TAP For EL Evaluation*	*TAP Emission Screening Level (EL)*	
CAS	HAP/TAP	HAP	TAP																	
	NSPS or NESHAP HAP/TAP -->			*Y*															Non-car	Carcin
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	ton/yr	ton/yr	lb/hr	lb/hr	lb/hr
106-99-0	1,3-Butadiene	Y	Y	Y	C	8.4E-7	3.7E-6					8.4E-7	3.7E-6			3.7E-6		0	--	2.4E-5
91-57-6	2-Methylnaphthalene	Y	N	n/a		1.1E-6	4.6E-6									4.6E-6			--	--
56-49-5	3-Methylchloranthrene	Y	Y	Y	C	7.8E-8	3.4E-7					3.3E-8	1.4E-7	4.5E-8	2.0E-7	3.4E-7		4.5E-8	--	2.5E-6
57-97-6	7,12-Dimethylbenz(a)anthracene	Y	N	n/a		7.6E-7	3.0E-6									3.0E-6			--	--
83-32-9	Acenaphthene	Y	N	n/a		5.7E-6	7.1E-6									7.1E-6			--	--
208-96-8	Acenaphthylene	Y	N	n/a		1.1E-5	1.4E-5									1.4E-5			--	--
75-07-0	Acetaldehyde	Y	Y	Y	C	2.5E-5	1.1E-4					2.5E-5	1.1E-4			1.1E-4			--	3.0E-3
107-02-8	Acrolein	Y	Y	Y	A	1.6E-5	2.0E-5					1.6E-5	2.0E-5			2.0E-5			0.017	--
120-12-7	Anthracene	Y	N	n/a		1.7E-6	2.4E-6									2.4E-6			--	--
7440-36-0	Antimony	Y	Y	Y	A	5.7E-4	2.5E-3					5.7E-4	2.5E-3	1.6E-6	5.1E-7	0.085		0.019	0.033	--
7440-38-2	Arsenic	Y	Y	Y	C	4.5E-3	0.020					4.5E-3	0.020	8.2E-6	3.6E-5	2.400		0.544	--	1.5E-6
71-43-2	Benzene	Y	Y	Y	C	7.4E-3	0.032					7.3E-3	0.032	5.3E-5	2.3E-4	0.032		5.3E-5	--	8.0E-4
50-32-8	Benzo(a)pyrene	Y	Y	Y	C	1.4E-7	6.1E-7					1.1E-7	4.8E-7	3.0E-8	1.3E-7	6.1E-7				
56-55-3	Benz(a)anthracene	Y	Y	Y	C	3.1E-7	1.4E-6					2.7E-7	1.2E-6	4.5E-8	2.0E-7	1.4E-6				
205-99-2	Benzo(b)fluoranthene	Y	Y	Y	C	4.4E-7	1.9E-6					3.9E-7	1.7E-6	4.5E-8	2.0E-7	1.9E-6				
207-08-9	Benzo(k)fluoranthene	Y	Y	Y	C	1.5E-7	6.6E-7					1.1E-7	4.7E-7	4.5E-8	2.0E-7	6.6E-7		2.9E-7	--	2.0E-6
218-01-9	Chrysene	Y	Y	Y	C	5.8E-7	2.5E-6					5.3E-7	2.3E-6	4.5E-8	2.0E-7	2.5E-6				
53-70-3	Dibenzo(a,h)anthracene	Y	Y	Y	C	1.8E-7	7.7E-7					1.5E-7	6.4E-7	3.0E-8	1.3E-7	7.7E-7				
193-39-5	Indeno(1,2,3-cd)pyrene	Y	Y	Y	C	2.2E-7	9.6E-7					1.7E-7	7.6E-7	4.5E-8	2.0E-7	9.6E-7				
191-24-2	Benzo(g,h,i)perylene	Y	N	n/a		7.5E-7	1.1E-6									1.1E-6			--	--
7440-41-7	Beryllium	Y	Y	Y	C	4.3E-4	1.9E-3					4.3E-4	1.9E-3	3.5E-7	1.5E-6	0.013		2.6E-3	--	2.8E-5
92-52-4	Biphenyl	Y	Y	Y	A	4.4E-5	1.9E-4					4.4E-5	1.9E-4			1.9E-4			0.100	--
7440-43-9	Cadmium	Y	Y	Y	C	4.6E-4	2.0E-3					4.3E-4	1.9E-3	2.8E-5	1.2E-4	3.8E-3		4.4E-4	--	3.7E-6
75-15-0	Carbon Disulfide	Y	Y	Y	A											0.063		0.014	2.000	--
7440-47-3	Chromium	Y	Y	Y	A	6.8E-4	2.8E-3					6.3E-4	2.6E-3	4.8E-5	1.6E-4	0.035		7.4E-3	0.033	--
18540-29-9	Cr (VI)	Y	Y	Y	C	3.4E-7	1.5E-6							3.4E-7	1.5E-6	1.5E-6		3.4E-7	--	5.6E-7
7440-48-4	Cobalt	Y	Y	Y	A	4.7E-4	2.0E-3					4.7E-4	2.0E-3	4.8E-6	1.0E-5	0.016		3.3E-3	3.3E-3	--
592-01-8	Cyanide	Y	Y	Y	A	1.2E-3	5.3E-3					1.2E-3	5.3E-3			1.988		0.453	0.333	--
106-46-7	Dichlorobenzene	Y	Y	Y	A	5.7E-5	2.3E-4					2.6E-5	9.6E-5	3.1E-5	1.3E-4	2.3E-4		3.1E-5	30.000	--
206-44-0	Fluoranthene	Y	N	n/a		5.5E-6	7.0E-6									7.0E-6			--	--
86-73-7	Fluorene	Y	N	n/a		1.7E-5	2.1E-5									2.1E-5			--	--
50-00-0	Formaldehyde	Y	Y	Y	C	3.3E-3	0.015					1.4E-3	6.2E-3	1.9E-3	8.3E-3	0.015		1.9E-3	--	5.1E-4
110-54-3	Hexane	Y	Y	Y	A	0.117	0.480					0.070	0.281	0.046	0.198	0.480		0.046	12.000	--
7647-01-0	Hydrogen Chloride	Y	Y	Y	A	0.986	3.666					0.986	3.666			3.666			0.050	--
7439-92-1	Lead	Y	N	n/a		4.8E-4	2.1E-3									0.031			--	--
7439-96-5	Manganese	Y	Y	Y	A	4.6E-3	0.017					4.4E-3	0.017	1.9E-4	2.2E-4	1.085		0.244	0.067	--
7439-97-6	Mercury	Y	N	n/a		7.1E-4	2.9E-3	6.9E-4	2.8E-3	1.3E-5	5.4E-5					8.6E-3	5.4E-5		--	--
91-20-3	Naphthalene	Y	Y	Y	A	2.1E-3	8.8E-3					2.1E-3	8.7E-3	1.6E-5	6.7E-5	8.8E-3		1.6E-5	3.330	--
7440-02-0	Nickel	Y	Y	Y	C	5.5E-4	2.4E-3					4.9E-4	2.2E-3	5.6E-5	2.4E-4	9.5E-3		1.7E-3	--	2.7E-5
85-01-8	Phenanthrene	Y	N	n/a		5.1E-5	6.3E-5									6.3E-5			--	--
108-95-2	Phenol	Y	Y	Y	A	2.4E-4	1.1E-3					2.4E-4	1.1E-3			1.1E-3			1.270	--
7723-14-0	Phosphorus	Y	Y	Y	A	5.6E-3	0.023					5.5E-3	0.023	9.3E-5	6.2E-5	2.343		0.530	7.0E-3	--
129-00-0	Pyrene	Y	N	n/a		5.0E-6	6.6E-6									6.6E-6			--	--
7782-49-2	Selenium	Y	Y	Y	A	4.1E-4	1.8E-3					4.1E-4	1.8E-3	6.2E-7	2.6E-6	3.2E-3		3.3E-4	0.013	--
108-88-3	Toluene	Y	Y	Y	A	0.032	0.139					0.032	0.139	8.8E-5	3.7E-4	0.139		8.8E-5	25.000	--
1330-20-7	Xylene	Y	Y	Y	A	0.032	0.138					0.032	0.138			0.138			29.000	--
7429-90-5	Aluminum	N	Y	N	A									0.648	2.577			58.504	0.667	--
7440-39-3	Barium	N	Y	N	A									6.8E-3	0.028			0.659	0.033	--
1317-65-3	Calcium Carbonate	N	Y	N	A									2.244	8.125			13.652	0.667	--
1305-78-8	Calcium Oxide	N	Y	N	A									0.696	0.952			0.696	0.133	--
7440-50-8	Copper	N	Y	N	A									5.3E-4	2.2E-3			4.6E-3	0.067	--
110-82-7	Cyclohexane	N	Y	N	A									1.0E-3	4.6E-3			1.0E-3	70.000	--
7783-06-4	Hydrogen Sulfide	N	Y	N	A									0.900	3.942			0.900	0.933	--
7439-89-6	Iron	N	Y	N	A									0.213	0.812			15.043	0.067	--
7439-98-7	Molybdenum	N	Y	N	A									4.7E-4	2.0E-3			1.3E-3	0.333	--
109-66-0	Pentane	N	Y	N	A									0.123	0.495			0.123	118	--
7440-22-4	Silver	N	Y	N	A									4.1E-4	1.8E-3			8.2E-4	7.0E-3	--
7664-93-9	Sulfuric Acid	N	Y	N	A									2.030	8.891			2.030	0.067	--
7440-28-0	Thallium	N	Y	N	A									5.2E-4	2.2E-3			8.7E-3	7.0E-3	--
7440-61-1	Uranium	N	Y	N	A									5.2E-4	2.2E-3			8.7E-3	0.013	--
7440-62-2	Vanadium	N	Y	N	A									8.4E-4	3.5E-3			0.024	3.0E-3	--
25551-13-7	Trimethyl benzene	N	Y	N	A									0.011	0.048			0.011	8.200	--
7440-33-7	Tungsten	N	Y	N	A									5.2E-4	2.2E-3	0		8.7E-3	0.333	--
7440-66-6	Zinc	N	Y	N	A									2.2E-3	8.8E-3	0		0.031	0.667	--
HAP TOTAL						*1.200*	*4.566*									*12.564*				
MERCURY TOTAL (exempt)								*6.9E-4*	*2.8E-3*											
MERCURY TOTAL (non-exempt)										*1.3E-5*	*5.4E-5*						*5.4E-5*			
TAP TOTAL (HAP-TAP addressed by NSPS/NESHAP)												*1.150*	*4.353*							
TAP TOTAL (For EL Evaluation)														*6.928*	*26.109*			*93.573*		

Air Sciences Inc.	PROJECT TITLE: Stibnite Gold Project	BY: K. Lewis
	PROJECT NO: 335-20-3	PAGE: 1 OF: 19 SHEET: Calcs
AIR EMISSION CALCULATIONS	SUBJECT: HAP/TAP Emission Calculations	DATE: October 4, 2021

Model Scenario W3 T-RACT Emissions

Hazardous Air Pollutants (HAP)/Toxic Air Pollutants (TAP) Emissions Summary

		Emissions[1]									
		Fuel Combustion		Process/Prod/Leach		Mining		Total			
CAS	**HAP/TAP**	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	HAP	TAP
106-99-0	1,3-Butadiene	8.4E-07	3.7E-06	0	0	0	0	8.4E-07	3.7E-06	Y	Y
91-57-6	2-Methylnaphthalene	1.1E-06	4.6E-06	0	0	0	0	1.1E-06	4.6E-06	Y	N
56-49-5	3-Methylchloranthrene	7.8E-08	3.4E-07	0	0	0	0	7.8E-08	3.4E-07	Y	Y
57-97-6	7,12-Dimethylbenz(a)anthracene	7.6E-07	3.0E-06	0	0	0	0	7.6E-07	3.0E-06	Y	N
83-32-9	Acenaphthene	5.7E-06	7.1E-06	0	0	0	0	5.7E-06	7.1E-06	Y	N
208-96-8	Acenaphthylene	1.1E-05	1.4E-05	0	0	0	0	1.1E-05	1.4E-05	Y	N
75-07-0	Acetaldehyde	2.5E-05	1.1E-04	0	0	0	0	2.5E-05	1.1E-04	Y	Y
107-02-8	Acrolein	1.6E-05	2.0E-05	0	0	0	0	1.6E-05	2.0E-05	Y	Y
120-12-7	Anthracene	1.7E-06	2.4E-06	0	0	0	0	1.7E-06	2.4E-06	Y	N
7440-36-0	Antimony	0	0	5.7E-04	2.5E-03	1.3E-02	5.8E-02	1.4E-02	6.1E-02	Y	Y
7440-38-2	Arsenic	8.7E-06	3.8E-05	4.5E-03	2.0E-02	0.23	1.02	0.24	1.04	Y	Y
56-55-3	Benz(a)anthracene	3.1E-07	1.4E-06	0	0	0	0	3.1E-07	1.4E-06	Y	Y
71-43-2	Benzene	3.6E-04	1.6E-03	7.0E-03	3.1E-02	0	0	7.4E-03	3.2E-02	Y	Y
50-32-8	Benzo(a)pyrene	1.4E-07	6.1E-07	0	0	0	0	1.4E-07	6.1E-07	Y	Y
205-99-2	Benzo(b)fluoranthene	4.4E-07	1.9E-06	0	0	0	0	4.4E-07	1.9E-06	Y	Y
191-24-2	Benzo(g,h,i)perylene	7.5E-07	1.1E-06	0	0	0	0	7.5E-07	1.1E-06	Y	N
207-08-9	Benzo(k)fluoranthene	1.5E-07	6.6E-07	0	0	0	0	1.5E-07	6.6E-07	Y	Y
7440-41-7	Beryllium	5.2E-07	2.3E-06	4.3E-04	1.9E-03	1.9E-03	8.1E-03	2.3E-03	1.0E-02	Y	Y
92-52-4	Biphenyl	0	0	4.4E-05	1.9E-04	0	0	4.4E-05	1.9E-04	Y	Y
7440-43-9	Cadmium	4.8E-05	2.1E-04	4.1E-04	1.8E-03	2.9E-04	1.3E-03	7.5E-04	3.3E-03	Y	Y
75-15-0	Carbon Disulfide	0	0	1.4E-02	6.3E-02	0	0	1.4E-02	6.3E-02	Y	Y
7440-47-3	Chromium	6.6E-05	2.7E-04	6.1E-04	2.5E-03	5.2E-03	2.3E-02	5.9E-03	2.6E-02	Y	Y
18540-29-9	Cr (VI)	0	0	3.4E-07	1.5E-06	0	0	3.4E-07	1.5E-06	Y	Y
218-01-9	Chrysene	5.8E-07	2.5E-06	0	0	0	0	5.8E-07	2.5E-06	Y	Y
7440-48-4	Cobalt	4.0E-06	1.6E-05	4.7E-04	2.0E-03	2.3E-03	1.0E-02	2.8E-03	1.2E-02	Y	Y
592-01-8	Cyanide	0	0	0.45	1.99	0	0	0.45	1.99	Y	Y
53-70-3	Dibenzo(a,h)anthracene	1.8E-07	7.7E-07	0	0	0	0	1.8E-07	7.7E-07	Y	Y
106-46-7	Dichlorobenzene	5.7E-05	2.3E-04	0	0	0	0	5.7E-05	2.3E-04	Y	Y
206-44-0	Fluoranthene	5.5E-06	7.0E-06	0	0	0	0	5.5E-06	7.0E-06	Y	N
86-73-7	Fluorene	1.7E-05	2.1E-05	0	0	0	0	1.7E-05	2.1E-05	Y	N
50-00-0	Formaldehyde	3.3E-03	1.5E-02	0	0	0	0	3.3E-03	1.5E-02	Y	Y
110-54-3	Hexane	8.5E-02	0.34	3.1E-02	0.14	0	0	0.12	0.48	Y	Y
7647-01-0	Hydrogen Chloride	0	0	0.99	3.67	0	0	0.99	**3.67**	Y	Y
193-39-5	Indeno(1,2,3-cd)pyrene	2.2E-07	9.6E-07	0	0	0	0	2.2E-07	9.6E-07	Y	Y
7439-92-1	Lead	0	0	4.8E-04	2.1E-03	4.6E-03	2.0E-02	5.1E-03	2.2E-02	Y	N
7439-96-5	Manganese	1.8E-05	7.2E-05	4.6E-03	1.7E-02	0.17	0.76	0.18	0.78	Y	Y
7439-97-6	Mercury	1.2E-05	5.0E-05	6.9E-04	2.9E-03	1.2E-03	5.1E-03	1.9E-03	8.0E-03	Y	N
91-20-3	Naphthalene	1.9E-04	3.1E-04	1.9E-03	8.5E-03	0	0	2.1E-03	8.8E-03	Y	Y
7440-02-0	Nickel	9.1E-05	4.0E-04	4.6E-04	2.0E-03	1.2E-03	5.1E-03	1.7E-03	7.5E-03	Y	Y
85-01-8	Phenanthrene	5.1E-05	6.3E-05	0	0	0	0	5.1E-05	6.3E-05	Y	N
108-95-2	Phenol	0	0	2.4E-04	1.1E-03	0	0	2.4E-04	1.1E-03	Y	Y
7723-14-0	Phosphorus	0	0	5.6E-03	2.3E-02	0.38	1.65	0.38	1.67	Y	Y
129-00-0	Pyrene	5.0E-06	6.6E-06	0	0	0	0	5.0E-06	6.6E-06	Y	N
7782-49-2	Selenium	1.1E-06	4.6E-06	4.1E-04	1.8E-03	2.3E-04	1.0E-03	6.4E-04	2.8E-03	Y	Y
108-88-3	Toluene	5.2E-04	1.1E-03	3.2E-02	0.14	0	0	3.2E-02	0.14	Y	Y
1330-20-7	Xylene	2.5E-04	3.0E-04	3.1E-02	0.14	0	0	3.2E-02	0.14	Y	Y
Total HAP		9.0E-02	0.36	1.58	6.25	0.81	3.56	2.48	10.17		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

	0.2155	0.8650	8.3307	31.6474	61.0803	267.5316	69.6264	300.0439
TRUE	0.2155	0.8650	8.3307	31.6474	61.0803	267.5316	69.6264	300.0439
	chk	chk	chk-15	chk	chk	chk	chk-14	chk

Hazardous Air Pollutants (HAP)/Toxic Air Pollutants (TAP) Emissions Summary - continued

		Emissions[1]									
		Fuel Combustion		Process/Prod/Leach		Mining		Total			
CAS	**Non-HAP TAP**	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	HAP	TAP
7429-90-5	Aluminum	0	0	0.65	2.58	41.11	180.04	41.75	182.62	N	Y
7440-39-3	Barium	2.1E-04	8.4E-04	6.6E-03	2.7E-02	0.46	2.03	0.47	2.06	N	Y
1317-65-3	Calcium Carbonate	0	0	2.24	8.12	8.11	35.50	10.35	43.63	N	Y
1305-78-8	Calcium Oxide	0	0	0.70	0.95	0	0	0.70	0.95	N	Y
7440-50-8	Copper	4.0E-05	1.6E-04	4.9E-04	2.1E-03	2.9E-03	1.3E-02	3.4E-03	1.5E-02	N	Y
110-82-7	Cyclohexane	0	0	1.0E-03	4.6E-03	0	0	1.0E-03	4.6E-03	N	Y
7783-06-4	Hydrogen Sulfide	0	0	0.90	3.94	0	0	0.90	3.94	N	Y
7439-89-6	Iron	0	0	0.21	0.81	10.54	46.15	10.75	46.96	N	Y
7439-98-7	Molybdenum	5.2E-05	2.1E-04	4.2E-04	1.8E-03	5.8E-04	2.5E-03	1.0E-03	4.6E-03	N	Y
109-66-0	Pentane	0.12	0.50	0	0	0	0	0.12	0.50	N	Y
7440-22-4	Silver	0	0	4.1E-04	1.8E-03	2.9E-04	1.3E-03	7.0E-04	3.1E-03	N	Y
7664-93-9	Sulfuric Acid	0	0	2.03	8.89	0	0	2.03	8.89	N	Y
7440-28-0	Thallium	0	0	5.2E-04	2.2E-03	5.8E-03	2.5E-02	6.3E-03	2.8E-02	N	Y
7440-61-1	Uranium	0	0	5.2E-04	2.2E-03	5.8E-03	2.5E-02	6.3E-03	2.8E-02	N	Y
7440-62-2	Vanadium	1.1E-04	4.4E-04	7.3E-04	3.0E-03	1.6E-02	7.1E-02	1.7E-02	7.4E-02	N	Y
25551-13-7	Trimethyl benzene	0	0	1.1E-02	4.8E-02	0	0	1.1E-02	4.8E-02	N	Y
7440-33-7	Tungsten	0	0	5.2E-04	2.2E-03	5.8E-03	2.5E-02	6.3E-03	2.8E-02	N	Y
7440-66-6	Zinc	1.4E-03	5.5E-03	8.0E-04	3.3E-03	2.0E-02	8.9E-02	2.2E-02	9.8E-02	N	Y
Total Non-HAP TAP		0.13	0.50	6.75	25.40	60.27	263.98	67.15	289.88		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

Conversions

2,000 lb/ton
8,760 hr/yr
24 hr/day

PROPANE COMBUSTION

Source Data

Source ID	Description	MMBtu/day	MMBtu/yr
Lime Process Heating			
LKC	PFR Shaft Lime Kiln Combustion	529.0	163,935
Ore Process Heating			
ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	17.0	510
CKB	Carbon Regeneration Kiln (Burners)	54.1	19,754
PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	2.4	876
HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	120.0	43,800
Subtotal		193.5	64,940
HVAC			
H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	96.0	35,040
H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	96.0	35,040
HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	96.0	35,040
HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	6.0	2,190
HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	6.0	2,190
HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	6.0	2,190
HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	12.0	4,380
HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	48.0	17,520
HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	72.0	26,280
Subtotal		438.0	159,870

PROPANE COMBUSTION - CONTINUED

HAP/TAP Emission Factors and Emissions

O.Heat_pph O.Heat_tpy L.Heat_pph L.Heat_tpy HVAC_pph HVAC_tpy lb/hr ton/yr

		Emission Factor[2]		Emissions[1] Ore Proc Heat		Lime Proc Heat		HVAC		Total			
CAS	Pollutant	lb/MMscf	lb/MMBtu[3]	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	TAP	A/C
91-57-6	2-Methylnaphthalene	2.4E-05	2.35E-8	1.9E-07	7.6E-07	5.2E-07	1.9E-06	4.3E-07	1.9E-06	1.1E-06	4.6E-06	N	
56-49-5	3-Methylchloranthrene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
57-97-6	7,12-Dimethylbenz(a)ant	< 1.6E-05	1.57E-8	1.3E-07	5.1E-07	3.5E-07	1.3E-06	2.9E-07	1.3E-06	7.6E-07	3.0E-06	N	
83-32-9	Acenaphthene	< 1.8E-06	1.76E-9	1.4E-08	5.7E-08	3.9E-08	1.4E-07	3.2E-08	1.4E-07	8.5E-08	3.4E-07	N	
208-96-8	Acenaphthylene	< 1.8E-06	1.76E-9	1.4E-08	5.7E-08	3.9E-08	1.4E-07	3.2E-08	1.4E-07	8.5E-08	3.4E-07	N	
120-12-7	Anthracene	< 2.4E-06	2.35E-9	1.9E-08	7.6E-08	5.2E-08	1.9E-07	4.3E-08	1.9E-07	1.1E-07	4.6E-07	N	
7440-38-2	Arsenic	2.0E-04	1.96E-7	1.5E-06	6.4E-06	3.7E-06	1.6E-05	3.6E-06	1.6E-05	8.7E-06	3.8E-05	Y	C
56-55-3	Benz(a)anthracene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
71-43-2	Benzene	2.1E-03	2.06E-6	1.5E-05	6.7E-05	3.9E-05	1.7E-04	3.8E-05	1.6E-04	9.1E-05	4.0E-04	Y	C
50-32-8	Benzo(a)pyrene	< 1.2E-06	1.18E-9	8.7E-09	3.8E-08	2.2E-08	9.6E-08	2.1E-08	9.4E-08	5.2E-08	2.3E-07	Y	C
205-99-2	Benzo(b)fluoranthene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
191-24-2	Benzo(g,h,i)perylene	< 1.2E-06	1.18E-9	9.5E-09	3.8E-08	2.6E-08	9.6E-08	2.1E-08	9.4E-08	5.7E-08	2.3E-07	N	
207-08-9	Benzo(k)fluoranthene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
7440-41-7	Beryllium	< 1.2E-05	1.18E-8	8.7E-08	3.8E-07	2.2E-07	9.6E-07	2.1E-07	9.4E-07	5.2E-07	2.3E-06	Y	C
7440-43-9	Cadmium	1.1E-03	1.08E-6	8.0E-06	3.5E-05	2.0E-05	8.8E-05	2.0E-05	8.6E-05	4.8E-05	2.1E-04	Y	C
7440-47-3	Chromium	1.4E-03	1.37E-6	1.1E-05	4.5E-05	3.0E-05	1.1E-04	2.5E-05	1.1E-04	6.6E-05	2.7E-04	Y	A
218-01-9	Chrysene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
7440-48-4	Cobalt	8.4E-05	8.24E-8	6.6E-07	2.7E-06	1.8E-06	6.8E-06	1.5E-06	6.6E-06	4.0E-06	1.6E-05	Y	A
53-70-3	Dibenzo(a,h)anthracene	< 1.2E-06	1.18E-9	8.7E-09	3.8E-08	2.2E-08	9.6E-08	2.1E-08	9.4E-08	5.2E-08	2.3E-07	Y	C
106-46-7	Dichlorobenzene	1.2E-03	1.18E-6	9.5E-06	3.8E-05	2.6E-05	9.6E-05	2.1E-05	9.4E-05	5.7E-05	2.3E-04	Y	A
206-44-0	Fluoranthene	3.0E-06	2.94E-9	2.4E-08	9.5E-08	6.5E-08	2.4E-07	5.4E-08	2.4E-07	1.4E-07	5.7E-07	N	
86-73-7	Fluorene	2.8E-06	2.75E-9	2.2E-08	8.9E-08	6.1E-08	2.3E-07	5.0E-08	2.2E-07	1.3E-07	5.3E-07	N	
50-00-0	Formaldehyde	7.5E-02	7.35E-5	5.5E-04	2.4E-03	1.4E-03	6.0E-03	1.3E-03	5.9E-03	3.3E-03	1.4E-02	Y	C
110-54-3	Hexane	1.8E+00	1.76E-3	1.4E-02	5.7E-02	3.9E-02	1.4E-01	3.2E-02	1.4E-01	8.5E-02	3.4E-01	Y	A
193-39-5	Indeno(1,2,3-cd)pyrene	< 1.8E-06	1.76E-9	1.3E-08	5.7E-08	3.3E-08	1.4E-07	3.2E-08	1.4E-07	7.8E-08	3.4E-07	Y	C
7439-96-5	Manganese	3.8E-04	3.73E-7	3.0E-06	1.2E-05	8.2E-06	3.1E-05	6.8E-06	3.0E-05	1.8E-05	7.2E-05	Y	A
7439-97-6	Mercury	2.6E-04	2.55E-7	2.1E-06	8.3E-06	5.6E-06	2.1E-05	4.7E-06	2.0E-05	1.2E-05	5.0E-05	N	
91-20-3	Naphthalene	6.1E-04	5.98E-7	4.8E-06	1.9E-05	1.3E-05	4.9E-05	1.1E-05	4.8E-05	2.9E-05	1.2E-04	Y	A
7440-02-0	Nickel	2.1E-03	2.06E-6	1.5E-05	6.7E-05	3.9E-05	1.7E-04	3.8E-05	1.6E-04	9.1E-05	4.0E-04	Y	C
85-01-8	Phenanthrene	1.7E-05	1.67E-8	1.3E-07	5.4E-07	3.7E-07	1.4E-06	3.0E-07	1.3E-06	8.1E-07	3.2E-06	N	
129-00-0	Pyrene	5.0E-06	4.90E-9	4.0E-08	1.6E-07	1.1E-07	4.0E-07	8.9E-08	3.9E-07	2.4E-07	9.5E-07	N	
7782-49-2	Selenium	< 2.4E-05	2.35E-8	1.9E-07	7.6E-07	5.2E-07	1.9E-06	4.3E-07	1.9E-06	1.1E-06	4.6E-06	Y	A
108-88-3	Toluene	3.4E-03	3.33E-6	2.7E-05	1.1E-04	7.3E-05	2.7E-04	6.1E-05	2.7E-04	1.6E-04	6.5E-04	Y	A
109-66-0	Pentane	2.6E+00	2.55E-3	2.1E-02	8.3E-02	5.6E-02	2.1E-01	4.7E-02	2.0E-01	1.2E-01	5.0E-01	Y	A
7440-39-3	Barium	4.4E-03	4.31E-6	3.5E-05	1.4E-04	9.5E-05	3.5E-04	7.9E-05	3.4E-04	2.1E-04	8.4E-04	Y	A
7440-50-8	Copper	8.5E-04	8.33E-7	6.7E-06	2.7E-05	1.8E-05	6.8E-05	1.5E-05	6.7E-05	4.0E-05	1.6E-04	Y	A
7439-98-7	Molybdenum	1.1E-03	1.08E-6	8.7E-06	3.5E-05	2.4E-05	8.8E-05	2.0E-05	8.6E-05	5.2E-05	2.1E-04	Y	A
7440-62-2	Vanadium	2.3E-03	2.25E-6	1.8E-05	7.3E-05	5.0E-05	1.8E-04	4.1E-05	1.8E-04	1.1E-04	4.4E-04	Y	A
7440-66-6	Zinc	2.9E-02	2.84E-5	2.3E-04	9.2E-04	6.3E-04	2.3E-03	5.2E-04	2.3E-03	1.4E-03	5.5E-03	Y	A
Total				3.6E-02	1.4E-01	9.8E-02	3.6E-01	8.1E-02	3.5E-01	2.1E-01	8.6E-01		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *AP-42, Table 1.4-3 & 1.4-4 (7/98) Natural Gas Combustion* 1.0766 1.0766

(3) *Natural Gas Higher Heating Value* 1,020 *MMBtu/MMscf* chk

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DIESEL COMBUSTION

Source Data

Source ID	Description	Power Rating kW	Power Rating hp	Operation hr/day	Operation hr/yr	Fuel Consumption[1] & [2] MMBtu/day	Fuel Consumption[1] & [2] MMBtu/yr
EDG1	Camp Emergency Generator	1,000	1,341	1	100	9.39	938.70
EDG2	Plant Emergency Generator #1	1,000	1,341	1	100	9.39	938.7
EDG3	Plant Emergency Generator #2	1,000	1,341	1	100	9.39	938.7
EDFP	Mill Fire Pump	200	268	1	100	1.88	187.7
Total						30.0	3,003.8

[1] *Based on brake specific fuel consumption for diesel generators* 7,000 *Btu/hp-hr* *AP-42 Tbl 3.3-1*

[2] *Heat Content of* 0.137 *MMBtu/gal* 1E+6 *Btu/MMBtu* 1.341 *hp/kW*

HAP/TAP Emission Factors and Emissions

	Pollutant	Factor (lb/MMBtu) ≤600 hp[2]	Factor (lb/MMBtu) >600hp[3]	Emissions (≤600 hp) lb/hr	Emissions (≤600 hp) ton/yr	Emissions (>600 hp) lb/hr	Emissions (>600 hp) ton/yr	Total Emissions[1] lb/hr	Total Emissions[1] ton/yr	TAP	A/C
106-99-0	1,3-Butadiene	< 3.9E-05		8.4E-07	3.7E-06	0.0E+00	0.0E+00	8.4E-07	3.7E-06	Y	C
83-32-9	Acenaphthene	< 1.4E-06	4.7E-06	1.1E-07	1.3E-07	5.5E-06	6.6E-06	5.6E-06	6.7E-06	N	
208-96-8	Acenaphthylene	< 5.1E-06	9.2E-06	4.0E-07	4.7E-07	1.1E-05	1.3E-05	1.1E-05	1.3E-05	N	
75-07-0	Acetaldehyde	7.7E-04	2.5E-05	1.6E-05	7.2E-05	8.1E-06	3.5E-05	2.5E-05	1.1E-04	Y	C
107-02-8	Acrolein	< 9.3E-05	7.9E-06	7.2E-06	8.7E-06	9.2E-06	1.1E-05	1.6E-05	2.0E-05	Y	A
120-12-7	Anthracene	1.9E-06	1.2E-06	1.5E-07	1.8E-07	1.4E-06	1.7E-06	1.6E-06	1.9E-06	N	
56-55-3	Benz(a)anthracene	1.7E-06	6.2E-07	3.6E-08	1.6E-07	2.0E-07	8.8E-07	2.4E-07	1.0E-06	Y	C
71-43-2	Benzene	9.3E-04	7.8E-04	2.0E-05	8.8E-05	2.5E-04	1.1E-03	2.7E-04	1.2E-03	Y	C
50-32-8	Benzo(a)pyrene	< 1.9E-07	< 2.6E-07	4.0E-09	1.8E-08	8.3E-08	3.6E-07	8.7E-08	3.8E-07	Y	C
205-99-2	Benzo(b)fluoranthene	< 9.9E-08	< 1.1E-06	2.1E-09	9.3E-09	3.6E-07	1.6E-06	3.6E-07	1.6E-06	Y	C
191-24-2	Benzo(g,h,i)perylene	< 4.9E-07	< 5.6E-07	3.8E-08	4.6E-08	6.5E-07	7.8E-07	6.9E-07	8.3E-07	N	
207-08-9	Benzo(k)fluoranthene	< 1.6E-07	< 2.2E-07	3.3E-09	1.5E-08	7.0E-08	3.1E-07	7.3E-08	3.2E-07	Y	C
218-01-9	Chrysene	3.5E-07	1.5E-06	7.6E-09	3.3E-08	4.9E-07	2.2E-06	5.0E-07	2.2E-06	Y	C
53-70-3	Dibenzo(a,h)anthracene	< 5.8E-07	< 3.5E-07	1.2E-08	5.5E-08	1.1E-07	4.9E-07	1.2E-07	5.4E-07	Y	C
206-44-0	Fluoranthene	7.6E-06	4.0E-06	6.0E-07	7.1E-07	4.7E-06	5.7E-06	5.3E-06	6.4E-06	N	
86-73-7	Fluorene	2.9E-05	1.3E-05	2.3E-06	2.7E-06	1.5E-05	1.8E-05	1.7E-05	2.1E-05	N	
50-00-0	Formaldehyde	1.2E-03	7.9E-05	2.5E-05	1.1E-04	2.5E-05	1.1E-04	5.1E-05	2.2E-04	Y	C
193-39-5	Indeno(1,2,3-cd)pyrene	< 3.8E-07	< 4.1E-07	8.0E-09	3.5E-08	1.3E-07	5.8E-07	1.4E-07	6.2E-07	Y	C
91-20-3	Naphthalene	8.5E-05	1.3E-04	6.6E-06	8.0E-06	1.5E-04	1.8E-04	1.6E-04	1.9E-04	Y	A
85-01-8	Phenanthrene	2.9E-05	4.1E-05	2.3E-06	2.8E-06	4.8E-05	5.7E-05	5.0E-05	6.0E-05	N	
129-00-0	Pyrene	4.8E-06	3.7E-06	3.7E-07	4.5E-07	4.4E-06	5.2E-06	4.7E-06	5.7E-06	N	
108-88-3	Toluene	4.1E-04	2.8E-04	3.2E-05	3.8E-05	3.3E-04	4.0E-04	3.6E-04	4.3E-04	Y	A
1330-20-7	Xylene	2.9E-04	1.9E-04	2.2E-05	2.7E-05	2.3E-04	2.7E-04	2.5E-04	3.0E-04	Y	A
Total				1.4E-04	3.6E-04	1.1E-03	2.2E-03	1.2E-03	2.6E-03		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *AP-42, Tab. 3.3-2, 10/96, diesel engines (≤ 600 hp)*

[3] *AP-42, Tabs. 3.4-3 & 3.4-4, 10/96, large diesel engines (> 600 hp)*

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ORE PROCESSING

Source Data

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
OC1	Loader Transfer of Ore to Grizzly	3.500	0.639
OC2	Grizzly to Apron Feeder	3.500	0.639
OC3	Apron Feeder to Dribble Conveyor	3.500	0.639
OC4	Apron Feeder to Vibrating Grizzly	3.500	0.639
OC5	Dribble Conveyor to Vibrating Grizzly	3.500	0.639
OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	3.500	0.639
OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	30.000	5.475
OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	3.500	0.639
OC9	Stockpile Transfers to Reclaim Conveyors	16.560	3.022
OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	16.560	3.022
OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	16.560	3.022
OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge C	33.120	6.044
OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	3.864	0.705
Total		141.164	25.762

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration ppm[2]	Emissions[1] lb/hr	Emissions[1] ton/yr	TAP	A/C
7440-38-2	Arsenic	667	3.9E-03	1.7E-02	Y	C
7440-41-7	Beryllium	3.2	1.9E-05	8.2E-05	Y	C
7440-43-9	Cadmium	0.50	2.9E-06	1.3E-05	Y	C
7440-48-4	Cobalt	4	2.4E-05	1.0E-04	Y	A
7440-47-3	Chromium	9	5.3E-05	2.3E-04	Y	A
7439-97-6	Mercury [3]	0.96	5.6E-06	2.5E-05	N	
7439-96-5	Manganese	299	1.8E-03	7.7E-03	Y	A
7440-02-0	Nickel	2	1.2E-05	5.2E-05	Y	C
7439-92-1	Lead	8	4.7E-05	2.1E-04	N	
7440-36-0	Antimony	23	1.4E-04	5.9E-04	Y	A
7723-14-0	Phosphorus	650	3.8E-03	1.7E-02	Y	A
7782-49-2	Selenium [4]	0.40	2.4E-06	1.0E-05	Y	A
7440-22-4	Silver	0.50	2.9E-06	1.3E-05	Y	A
7429-90-5	Aluminum	71,000	4.2E-01	1.8E+00	Y	A
7440-39-3	Barium	800	4.7E-03	2.1E-02	Y	A
1317-65-3	Calcium Carbonate	14,000	8.2E-02	3.6E-01	Y	A
7440-50-8	Copper	5	2.9E-05	1.3E-04	Y	A
7439-89-6	Iron [4]	18,200	1.1E-01	4.7E-01	Y	A
7439-98-7	Molybdenum	1	5.9E-06	2.6E-05	Y	A
7440-28-0	Thallium	10	5.9E-05	2.6E-04	Y	A
7440-61-1	Uranium	10	5.9E-05	2.6E-04	Y	A
7440-62-2	Vanadium	28	1.6E-04	7.2E-04	Y	A
7440-33-7	Tungsten	10	5.9E-05	2.6E-04	Y	A
7440-66-6	Zinc	35	2.1E-04	9.0E-04	Y	A
Total			6.2E-01	2.7E+00		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *(Midas Gold 2017c)* *Median concentration of 55,000 SGP samples.*

[3] *(Midas Gold 2018e)* *Median ore concentration of 151,000 SGP samples; resource block model.*

[4] *(Midas Gold 2020)* *Median concentration of 56,000 SGP samples for Fe and 1,500 SGP samples for Se.*

1E+6 parts/ppm

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ORE CONCETRATION AND REFINING

Source Data

Source ID	Description	Subpart 7E Allowable Limit lb/yr[1]	Oper. hr/yr	% of Subpart 7E for Controlled Systems %		Controlled Hg Emissions lb/hr	ton/yr	lb/yr
AC	Autoclave	213.4	8,760	[2]		0.000023	0.00010	0.20
EW,MR,MF,CKD	Refinery Sources (C. Kiln, EW, Retort, Furn	16.8		20%	[3]	0.000384	0.00168	3.36
7439-97-6 Mercury	Total	230.2				0.000407	0.00178	3.56

[1] *Subpart 7E Limit - Ore Pretreatment Processes (CFR 2018b)*

$$\frac{84\ lb}{MMton} \times \frac{2{,}540{,}400\ ton}{yr} \times \frac{MMton}{1.0E{+}6\ ton} = \frac{213.4\ lb}{yr}$$

[1] *Subpart 7E Limit - Carbon Processes with Mercury Retorts*

$$\frac{0.8\ lb}{ton} \times \frac{21\ ton}{yr} = \frac{16.8\ lb}{yr}$$

[2] *Controlled SysCAD modeled emissions from Autoclave:* 0.0105 g/hr 2.3E-05 lb/hr 0.20 lb/yr (M3 2019)

[3] *Based on similar source (but with much higher ore Hg content) Hg reporting levels provided below:*

Goldstrike Refinery (2015 & 2016 Hg Reports) (NDEP 2015a) (NDEP 2016)

$$\frac{28.79\ lb}{yr} \times \frac{yr}{251.00\ ton} = \frac{0.11\ lb}{MMton} \times \frac{ton}{0.8\ lb} = 14.3\%$$

Twin Creeks Refinery (2015 & 2016 Hg Reports) (NDEP 2015a) (NDEP 2016)

$$\frac{31.27\ lb}{yr} \times \frac{yr}{142.77\ ton} = \frac{0.22\ lb}{MMton} \times \frac{ton}{0.8\ lb} = 27.4\%$$

HAP/TAP Emission Factors and Emission

AC_pph AC_tpy Refin_pph Refin_tpy lb/hr ton/yr

CAS No.	Pollutant	Emission Factor[1]	Autoclave lb/hr	Autoclave ton/yr	Refinery lb/hr	Refinery ton/yr	Total Emissions lb/hr	Total Emissions ton/yr	TAP	A/C
7440-38-2	Arsenic	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7440-41-7	Beryllium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7440-43-9	Cadmium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7440-48-4	Cobalt	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-47-3	Chromium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7439-97-6	Mercury	see above	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	N	
7439-96-5	Manganese	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-02-0	Nickel	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	C
7439-92-1	Lead	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	N	
7440-36-0	Antimony	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7723-14-0	Phosphorus	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7782-49-2	Selenium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-22-4	Silver	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7429-90-5	Aluminum	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-39-3	Barium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
1317-65-3	Calcium Carbonate	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-50-8	Copper	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7439-89-6	Iron	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7439-98-7	Molybdenum	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-28-0	Thallium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-61-1	Uranium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-62-2	Vanadium	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-33-7	Tungsten	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
7440-66-6	Zinc	same as Hg	2.3E-05	1.0E-04	3.8E-04	1.7E-03	4.1E-04	1.8E-03	Y	A
Total			5.5E-04	2.4E-03	9.2E-03	4.0E-02	9.8E-03	4.3E-02		

[1] *Hg is the most difficult metal to control due to it existing in both particulate and gaseous form. Therefore, all other metals are conservatively estimated to be equal to or less than the Hg emissions.*

0.0525 0.0525 chk

7664-93-9	Sulfuric Acid	Autoclave	2.03	8.89			2.03	8.89
7783-06-4	Hydrogen Sulfid	Autoclave	0.90	3.94			0.90	3.94
592-01-8	Cyanide	Point Sources - 5 EW Cells			0.0012	0.0053	0.00	0.01
Total			2.93	12.84	0.01	0.05	2.94	12.88

ORE CONCETRATION AND REFINING - CONTINUED

Source Data

Source ID	Description	Throughput ton/day	Throughput ton/yr	Operation hr/day	Operation hr/yr
AC	Autoclave	6,960	2,540,400	24	8,760

Autoclave HAP/TAP Emission Factors and Emission lb/hr ton/yr

CAS No.	Pollutant	Emission Factor		Emissions[1] lb/hr	Emissions[1] ton/yr
7664-93-9	Sulfuric Acid	0.007	lb/ton[2]	2.03	8.89
7783-06-4	Hydrogen Sulfide	0.9	lb/hr[3]	0.90	3.94

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *H2SO4 is based on Acidic Autoclave test data (APT 2010)*

[3] *H2S is based on Acidic Autoclave test data (APT 2013)*

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LEACHING OPERATION

Cyanide (HCN) Source Data, Emission Factors, and Emissions

Source ID	Description	Dia. ft[1]	pH[1]	Free CN- g/m3[1]	T C[1]	pKa	a0	H	kG[2] m/s	Fa*Fw	g/s	lb/hr	ton/yr
												lb/hr	ton/yr
TSF	***Fugitive Sources***												
TSF	Tailings Maint. Pond	76	7.75	1	3.74	9.803	0.9912	0.0025	1.89E-05	0.641	1.27E-05	0.0001	0.0004
MILLTA	CN Detox Tank 1	40	8.5	25	25	9.250	0.8490	0.0055	0.000311	0.688	0.002891	0.0229	0.101
MILLTA	CN Detox Tank 2	40	8.5	25	25	9.250	0.8490	0.0055	0.000311	0.688	0.002891	0.0229	0.101
MILLTA	CIP Leach Tank 1	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIP Leach Tank 2	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIP Leach Tank 3	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIP Leach Tank 4	52	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.668	0.001435	0.0114	0.050
MILLTA	CIL Tank 1	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 2	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 3	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 4	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 5	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIL Tank 6	54	10.25	125	30	9.120	0.0690	0.0065	0.000311	0.666	0.002485	0.0197	0.086
MILLTA	CIP Tank 1	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 2	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 3	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 4	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 5	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
MILLTA	CIP Tank 6	20	10.25	125	52.5	8.535	0.0189	0.0148	0.000311	0.742	0.000236	0.0019	0.008
		Acres[1]											
TSF	Tails, Aqueous Surface	110.222	7.75	1	3.74	9.803	0.9912	0.0025	1.89E-05	0.421	0.008845	0.0702	0.307
TSF	Tails, Wet Sediment	110.222							5.31E-08	0.421	0.009961	0.0791	0.346
TSF	Tails, Dry Sediment	110.222							2.33E-08	1	0.010375	0.0823	0.361
		330.666											
592-01-8	Cyanide Fugitive Sources - Subtotal											0.4527	1.983
75-15-0	Carbon Disulfide											0.01446	0.06332
	Point Sources												
EW	EW Cells	[3]										0.0006	0.003
EW	Preg/Barren Tanks	[3]										0.0006	0.003
592-01-8	Cyanide Point Sources - Subtotal											0.0012	0.0053
	Total											0.454	1.988

[1] *(Midas Gold 2016)(M3 2017c)(M3 2017d)*

[2] *The emission factors and caculation methodology are from the EPA directed HCN study: (Card, T. 2009)(EPA 2009)(Schmidt 2010)*

[3] *(APT 2009)*

Carbon Disulfide Emissions from Xanthate Decomposition

CAS No.	Pollutant	Xanthate[1] ton/yr	Molar Decomp.[2]	CS_2 MW Ratio	Temperature Adj. Factor[3]	Emissions lb/hr	Emissions ton/yr
						lb/hr	ton/yr
75-15-0	Carbon Disulfide	1,700	0.99%	0.376	1%	0.0145	0.063

	MW	
Xanthate (PAX)	202.37	$C6H11KOS_2$
Carbon disulfide	76.139	CS_2

[1] *(Midas Gold 2016) p. 12-11*

[2] *(Air Sciences 2020) molar decomposition of xanthate in solution to CS2 gas*

[3] *(Air Sciences 2020) based on the comparison of CS2 generation at 25C and 70C*

Conversions

8,760	hr/yr	453.5929	g/lb
2,000	lb/ton	3.28084	ft/m
4,046.86	m2/acre	3,600	s/hr

Wind adjustment factor Fw 1

Air Sciences Inc.	PROJECT TITLE: Stibnite Gold Project	BY: K. Lewis		
	PROJECT NO: 335-20-3	PAGE: 10	OF: 19	SHEET: Calcs
AIR EMISSION CALCULATIONS	SUBJECT: HAP/TAP Emission Calculations	DATE: October 4, 2021		

LIME PRODUCTION

Source Data

Source ID	Description	Throughput ton/day	Throughput ton/yr	PM Emissions lb/day	PM Emissions ton/yr
LS1	Limestone transfer to Primary Crusher Hopper			3.39	0.48
LS2	Primary Crushing and Associated Transfers In and Out			6.10	0.86
LS3	Primary Screening and Associated Transfers In and Out			28.25	3.97
LS4	Secondary Crushing and Associated Transfers In and Out			6.10	0.86
LS5	Secondary Screening and Associated Transfers In and Out			28.25	3.97
LS6	Limestone transfer to Ball Mill Feed Bin			3.39	0.48
LS7	Limestone transfer to Ball Mill Feed Conveyor			3.39	0.48
LS8	Ball Mill Feed transfer to Ball Mill			3.39	0.48
LSBM	Limestone Ball Mill			45.65	6.42
LS9	Limestone transfer to Kiln Feed Bin			0.80	0.12
LS10	Limestone transfer to Lime Kiln Feed Conveyor			0.80	0.12
LS11	Fines Screening and Associated Transfers In and Out			6.68	1.03
Subtotal LS1-11				136.18	19.28
LS12	Kiln Feed transfer to PFR Shaft Lime Kiln			0.80	0.12
LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	169	52,377	21.97	3.40
Subtotal LS12,LK				22.77	3.53
Total				158.95	22.80

HAP/TAP Emission Factors and Emissions

			LS_pph	LS_tpy	LS12_pph	LS12_tpy	LK_pph	LK_tpy	lb/hr	ton/yr		
		Concentration	LS1-11,LSBM		LS12		Lime Kiln		Emissions[1]			
CAS No.	Pollutant	ppm[2]	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	TAP	A/C
7440-38-2	Arsenic	23	1.01E-04	4.43E-04	6.51E-07	2.85E-06	1.79E-05	7.83E-05	1.20E-04	5.24E-04	Y	C
7440-41-7	Beryllium	0.8	3.52E-06	1.54E-05	2.27E-08	9.92E-08	6.22E-07	2.72E-06	4.17E-06	1.82E-05	Y	C
7440-43-9	Cadmium	0.25	1.10E-06	4.82E-06	7.08E-09	3.10E-08	1.94E-07	8.51E-07	1.30E-06	5.70E-06	Y	C
7440-48-4	Cobalt	4	2.27E-05	7.71E-05	1.34E-07	4.96E-07	3.66E-06	1.36E-05	2.65E-05	9.12E-05	Y	A
7440-47-3	Chromium	15	8.51E-05	2.89E-04	5.01E-07	1.86E-06	1.37E-05	5.11E-05	9.93E-05	3.42E-04	Y	A
7439-97-6	Mercury [3]	0.02	1.13E-07	3.86E-07	6.68E-10	2.48E-09	2.82E-04	1.05E-03	2.82E-04	1.05E-03	N	
7439-96-5	Manganese	236.5	1.34E-03	4.56E-03	7.89E-06	2.93E-05	2.16E-04	8.05E-04	1.57E-03	5.39E-03	Y	A
7440-02-0	Nickel	5	2.20E-05	9.64E-05	1.42E-07	6.20E-07	3.89E-06	1.70E-05	2.60E-05	1.14E-04	Y	C
7439-92-1	Lead	3	1.70E-05	5.78E-05	1.00E-07	3.72E-07	2.75E-06	1.02E-05	1.99E-05	6.84E-05	N	
7440-36-0	Antimony	2.5	1.42E-05	4.82E-05	8.34E-08	3.10E-07	2.29E-06	8.51E-06	1.66E-05	5.70E-05	Y	A
7723-14-0	Phosphorus	130	7.38E-04	2.51E-03	4.34E-06	1.61E-05	1.19E-04	4.43E-04	8.61E-04	2.96E-03	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22600	1.28E-01	4.36E-01	7.54E-04	2.80E-03	2.07E-02	7.69E-02	1.50E-01	5.15E-01	Y	A
7440-39-3	Barium	145	8.23E-04	2.79E-03	4.84E-06	1.80E-05	1.33E-04	4.94E-04	9.60E-04	3.31E-03	Y	A
1317-65-3	Calcium Carbonate	274500	1.56E+00	5.29E+00	9.16E-03	3.40E-02	2.51E-01	9.35E-01	1.82E+00	6.26E+00	Y	A
7440-50-8	Copper	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7439-89-6	Iron	10350	5.87E-02	1.99E-01	3.45E-04	1.28E-03	9.47E-03	3.52E-02	6.85E-02	2.36E-01	Y	A
7439-98-7	Molybdenum	0.5	2.84E-06	9.64E-06	1.67E-08	6.20E-08	4.58E-07	1.70E-06	3.31E-06	1.14E-05	Y	A
7440-28-0	Thallium	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7440-61-1	Uranium	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7440-62-2	Vanadium	15.5	8.79E-05	2.99E-04	5.17E-07	1.92E-06	1.42E-05	5.28E-05	1.03E-04	3.53E-04	Y	A
7440-33-7	Tungsten	5	2.84E-05	9.64E-05	1.67E-07	6.20E-07	4.58E-06	1.70E-05	3.31E-05	1.14E-04	Y	A
7440-66-6	Zinc	18	1.02E-04	3.47E-04	6.01E-07	2.23E-06	1.65E-05	6.13E-05	1.19E-04	4.10E-04	Y	A
Subtotal			1.75E+00	5.94E+00	1.03E-02	3.82E-02	2.82E-01	1.05E+00	2.04E+00	7.03E+00	9.0667	9.0667
7647-01-0	Hydrogen Chloride	0.14 lb/ton product[4]					0.99	3.67	0.99	3.67		chk

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *(M3 2018) Median concentrations of SGP limestone material. Metals with medians below the detection limit (DL) are set to 1/2DL.*

[3] *Hg emissions from the Lime Kiln are conservatively estimated assuming 100% volatilization of all Hg in the limestone*

[4] *(EPA 1999b)*

1E+6 parts/ppm

LIME PRODUCTION - CONTINUED

Source Data

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
LS1L	Mill Lime Silo #1 Loading	0.248	0.002
LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	1.200	0.011
MillS2L	Mill Lime Silo #2 Loading	0.248	0.002
MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	1.200	0.011
ACS1L	AC Lime Silo #1 Loading	0.990	0.009
ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.304	0.042
ACS2L	AC Lime Silo #2 Loading	0.990	0.009
ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.304	0.042
ACS3L	AC Lime Silo #3 Loading	0.990	0.009
ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.304	0.042
ACS4L	AC Lime Silo #4 Loading	0.495	0.004
ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	2.304	0.021
Subtotal - Mill & AC Lime Silos		15.576	0.203
LCR	Lime Mill Crushing and associated transfers In and Out	6.828	1.058
LSL	Pebble Lime Silo Loading via Bucket Elevator	0.149	0.023
LSU	Pebble Lime Silo discharge to Lime Slaker	0.015	0.002
Subtotal - Lime Mfg		6.991	1.083
Total		22.567	1.286

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration ppm[2]	Mill and AC lb/hr	Mill and AC ton/yr	Lime Mfg lb/hr	Lime Mfg ton/yr	Emissions[1] lb/hr	Emissions[1] ton/yr	TAP	A/C
7440-38-2	Arsenic	23	1.06E-06	4.66E-06	5.69E-06	2.49E-05	6.75E-06	2.96E-05	Y	C
7440-41-7	Beryllium	0.8	3.70E-08	1.62E-07	1.98E-07	8.67E-07	2.35E-07	1.03E-06	Y	C
7440-43-9	Cadmium	0.25	1.16E-08	5.07E-08	6.18E-08	2.71E-07	7.34E-08	3.22E-07	Y	C
7440-48-4	Cobalt	4	2.60E-06	8.11E-07	1.17E-06	4.33E-06	3.76E-06	5.14E-06	Y	A
7440-47-3	Chromium	15	9.74E-06	3.04E-06	4.37E-06	1.63E-05	1.41E-05	1.93E-05	Y	A
7439-97-6	Mercury	0.02	1.30E-08	4.05E-09	5.83E-09	2.17E-08	1.88E-08	2.57E-08	N	
7439-96-5	Manganese	236.5	1.53E-04	4.79E-05	6.89E-05	2.56E-04	2.22E-04	3.04E-04	Y	A
7440-02-0	Nickel	5	2.31E-07	1.01E-06	1.24E-06	5.42E-06	1.47E-06	6.43E-06	Y	C
7439-92-1	Lead	3	1.95E-06	6.08E-07	8.74E-07	3.25E-06	2.82E-06	3.86E-06	N	
7440-36-0	Antimony	2.5	1.62E-06	5.07E-07	7.28E-07	2.71E-06	2.35E-06	3.22E-06	Y	A
7723-14-0	Phosphorus	130	8.44E-05	2.63E-05	3.79E-05	1.41E-04	1.22E-04	1.67E-04	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22,600	1.47E-02	4.58E-03	6.58E-03	2.45E-02	2.13E-02	2.91E-02	Y	A
7440-39-3	Barium	145	9.41E-05	2.94E-05	4.22E-05	1.57E-04	1.36E-04	1.86E-04	Y	A
1305-78-8	Calcium Oxide	740,000 [3]	4.80E-01	1.50E-01	2.16E-01	8.02E-01	6.96E-01	9.52E-01	Y	A
7440-50-8	Copper	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7439-89-6	Iron	10350	6.72E-03	2.10E-03	3.01E-03	1.12E-02	9.73E-03	1.33E-02	Y	A
7439-98-7	Molybdenum	0.5	3.25E-07	1.01E-07	1.46E-07	5.42E-07	4.70E-07	6.43E-07	Y	A
7440-28-0	Thallium	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7440-61-1	Uranium	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7440-62-2	Vanadium	15.5	1.01E-05	3.14E-06	4.52E-06	1.68E-05	1.46E-05	1.99E-05	Y	A
7440-33-7	Tungsten	5	3.25E-06	1.01E-06	1.46E-06	5.42E-06	4.70E-06	6.43E-06	Y	A
7440-66-6	Zinc	18	1.17E-05	3.65E-06	5.24E-06	1.95E-05	1.69E-05	2.31E-05	Y	A
Total			5.02E-01	1.57E-01	2.25E-01	8.38E-01	7.27E-01	9.95E-01		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *See LIME PRODUCTION, page 10*

[3] *(NLA 2007) 40% to 74% CaO in lime*

1E+6 parts/ppm

Air Sciences Inc.	PROJECT TITLE: Stibnite Gold Project	BY: K. Lewis	
	PROJECT NO: 335-20-3	PAGE: 12	OF: 19 SHEET: Calcs
AIR EMISSION CALCULATIONS	SUBJECT: HAP/TAP Emission Calculations	DATE: October 4, 2021	

AGGREGATE PRODUCTION

Source Data

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conve	15.00	2.74
PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conve	15.00	2.74
Total		30.00	5.48

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration ppm[2]	Emissions[1] lb/hr	Emissions[1] ton/yr	TAP	A/C
7440-38-2	Arsenic	23	2.88E-05	1.26E-04	Y	C
7440-41-7	Beryllium	0.8	1.00E-06	4.38E-06	Y	C
7440-43-9	Cadmium	0.25	3.13E-07	1.37E-06	Y	C
7440-48-4	Cobalt	4	5.00E-06	2.19E-05	Y	A
7440-47-3	Chromium	15	1.88E-05	8.21E-05	Y	A
7439-97-6	Mercury	0.02	2.50E-08	1.10E-07	N	
7439-96-5	Manganese	236.5	2.96E-04	1.29E-03	Y	A
7440-02-0	Nickel	5	6.25E-06	2.74E-05	Y	C
7439-92-1	Lead	3	3.75E-06	1.64E-05	N	
7440-36-0	Antimony	2.5	3.13E-06	1.37E-05	Y	A
7723-14-0	Phosphorus	130	1.63E-04	7.12E-04	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22600	2.83E-02	1.24E-01	Y	A
7440-39-3	Barium	145	1.81E-04	7.94E-04	Y	A
1317-65-3	Calcium Carbonate	274500	3.43E-01	1.50E+00	Y	A
7440-50-8	Copper	5	6.25E-06	2.74E-05	Y	A
7439-89-6	Iron	10350	1.29E-02	5.67E-02	Y	A
7439-98-7	Molybdenum	0.5	6.25E-07	2.74E-06	Y	A
7440-28-0	Thallium	5	6.25E-06	2.74E-05	Y	A
7440-61-1	Uranium	5	6.25E-06	2.74E-05	Y	A
7440-62-2	Vanadium	15.5	1.94E-05	8.49E-05	Y	A
7440-33-7	Tungsten	5	6.25E-06	2.74E-05	Y	A
7440-66-6	Zinc	18	2.25E-05	9.86E-05	Y	A
Total			3.85E-01	1.69E+00		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *See LIME PRODUCTION, page 10*

1E+6 parts/ppm

CONCRETE PRODUCTION

Source Data

Source ID	Description	Throughput ton/day	Throughput ton/yr
	description	TP_unit/day	TP_unit/yr
CS1L	Cement/Shotcrete Silo #1 Loading	164	60,000
CS1U	Cement/Shotcrete Silo #1 Unloading	164	60,000
CS2L	Cement/Shotcrete Silo #2 Loading	164	60,000
CS2U	Cement/Shotcrete Silo #2 Unloading	164	60,000
CM	Central Mixer Loading	164	60,000
	Subtotal Cement Silo Filling	658	240,000
	Subtotal Central Mix Batching	164	60,000

HAP/TAP Emission Factors and Emissions

CAS No.	HAP/TAP	Silo Fill lb/ton[2]	Central Mixer lb/ton[3]	Cement Silo L/U lb/hr (CF_pph)	Cement Silo L/U ton/yr (CF_tpy)	Central Mix Batching lb/hr (CM_pph)	Central Mix Batching ton/yr (CM_tpy)	Total Emissions[3] lb/hr	Total Emissions[3] ton/yr	TAP	A/C
7440-38-2	Arsenic	4.24E-09	2.96E-07	1.16E-7	5.09E-7	2.03E-6	8.88E-6	2.14E-6	9.39E-6	Y	C
7440-41-7	Beryllium	4.86E-10		1.33E-8	5.83E-8	--	--	1.33E-8	5.83E-8	Y	C
7440-43-9	Cadmium		7.10E-10	--	--	4.86E-9	2.13E-8	4.86E-9	2.13E-8	Y	C
7440-47-3	Chromium	2.90E-08	1.27E-07	7.95E-7	3.48E-6	8.70E-7	3.81E-6	1.66E-6	7.29E-6	Y	A
18540-29-9	Cr (VI)	5.80E-09	2.70E-08	1.59E-7	6.96E-7	1.85E-7	8.11E-7	3.44E-7	1.51E-6	Y	C
7439-92-1	Lead	1.09E-08	3.66E-08	2.99E-7	1.31E-6	2.51E-7	1.10E-6	5.49E-7	2.41E-6	N	
7439-96-5	Manganese	1.17E-07	3.78E-06	3.21E-6	1.40E-5	2.59E-5	1.13E-4	2.91E-5	1.27E-4	Y	A
7440-02-0	Nickel	4.18E-08	2.48E-07	1.15E-6	5.02E-6	1.70E-6	7.44E-6	2.84E-6	1.25E-5	Y	C
7723-14-0	Phosphorus		1.20E-06	--	--	8.22E-6	3.60E-5	8.22E-6	3.60E-5	Y	A
Total				5.73E-6	2.51E-5	3.91E-5	1.71E-4	4.49E-5	1.97E-4		

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

[2] *AP-42, Table 11.12-8, (06/06) Cement Silo Filing, Controlled.* 20% *Cr (VI), IDEQ email on 11/23/2020* 0.0002 0.0002

[3] *AP-42, Table 11.12-8, (06/06) Central Mix Batching, Controlled.* 21.29% *Cr (VI), IDEQ email on 11/23/2020* chk

Conversions

24 hr/day

CONCRETE PRODUCTION - CONTINUED

Source Data

PM_ppd PM_tpy

Source ID	description Description	PM Emissions lb/day	ton/yr
CAL	Aggregate Bin Loading	16.56	1.73
CAU	Aggregate Bin Unloading	16.56	1.73
Total		33.12	3.45

HAP/TAP Emission Factors and Emissions

lb/hr ton/yr

CAS No.	Pollutant	Concentration ppm[2]	Emissions[1] lb/hr	ton/yr	TAP	A/C
7440-38-2	Arsenic	23	1.81E-05	7.94E-05	Y	C
7440-41-7	Beryllium	0.8	6.30E-07	2.76E-06	Y	C
7440-43-9	Cadmium	0.25	1.97E-07	8.63E-07	Y	C
7440-48-4	Cobalt	4	5.52E-06	1.38E-05	Y	A
7440-47-3	Chromium	15	2.07E-05	5.18E-05	Y	A
7439-97-6	Mercury	0.02	2.76E-08	6.90E-08	N	
7439-96-5	Manganese	236.5	3.26E-04	8.16E-04	Y	A
7440-02-0	Nickel	5	3.94E-06	1.73E-05	Y	C
7439-92-1	Lead	3	4.14E-06	1.04E-05	N	
7440-36-0	Antimony	2.5	3.45E-06	8.63E-06	Y	A
7723-14-0	Phosphorus	130	1.79E-04	4.49E-04	Y	A
7440-22-4	Silver	0	0.00E+00	0.00E+00	Y	A
7429-90-5	Aluminum	22600	3.12E-02	7.80E-02	Y	A
7440-39-3	Barium	145	2.00E-04	5.00E-04	Y	A
7440-50-8	Copper	5	6.90E-06	1.73E-05	Y	A
7439-89-6	Iron	10350	1.43E-02	3.57E-02	Y	A
7439-98-7	Molybdenum	0.5	6.90E-07	1.73E-06	Y	A
7440-28-0	Thallium	5	6.90E-06	1.73E-05	Y	A
7440-61-1	Uranium	5	6.90E-06	1.73E-05	Y	A
7440-62-2	Vanadium	15.5	2.14E-05	5.35E-05	Y	A
7440-33-7	Tungsten	5	6.90E-06	1.73E-05	Y	A
7440-66-6	Zinc	18	2.48E-05	6.21E-05	Y	A
Total			4.63E-02	1.16E-01		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *See LIME PRODUCTION, page 10*

1E+6 parts/ppm

FUEL STORAGE - GASOLINE

Source Data

Source ID	description Description	VOC_ppd VOC Emissions lb/day	VOC_tpy VOC Emissions ton/yr
TG1	Mine Site Gasoline Tank #1	5.25	0.96
TG2	Mine Site Gasoline Tank #2	5.25	0.96
Total		10.49	1.91

HAP/TAP Emission Factors and Emissions

CAS No.	Pollutant	Concentration wt. %[2]	lb/hr Emissions[1] lb/hr	ton/yr Emissions[1] ton/yr	TAP	A/C
71-43-2	Benzene	1.608%	7.03E-03	3.08E-02	Y	C
92-52-4	Biphenyl	0.010%	4.37E-05	1.91E-04	Y	A
110-82-7	Cyclohexane	0.240%	1.05E-03	4.60E-03	Y	A
110-54-3	Hexane	7.138%	3.12E-02	1.37E-01	Y	A
91-20-3	Naphthalene	0.444%	1.94E-03	8.50E-03	Y	A
108-95-2	Phenol	0.055%	2.40E-04	1.05E-03	Y	A
108-88-3	Toluene	7.212%	3.15E-02	1.38E-01	Y	A
25551-13-7	Trimethyl benzene	2.500%	1.09E-02	4.79E-02	Y	A
1330-20-7	Xylene	7.170%	3.13E-02	1.37E-01	Y	A
Total			1.15E-01	5.05E-01		

(1) *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.*

(2) *(EPA 1999a)*

MINING FUGITIVE EMISSIONS

Dust Emissions

Source Data **Model Scenario** **W3** **T-RACT Emissions**

Operating schedule 365 day/yr

Clean rock cap (CR >50% [1]

[1] *(Perpetua 2021h) Percent of VMTs on haul roads capped with CR*

Roads outside of the pits and DRSFs are capped with CR

Source ID	Description	PM Emissions lb/day	PM Emissions ton/yr
YPP	Yellow Pine Pit	--	--
HFP	Hangar Flats Pit	--	--
WEP	West End Pit	338.16	61.71
BT	Bradley Tailings	--	--
YPPBL	Yellow Pine Pit Blasting	--	--
HFPBL	Hangar Flats Pit Blasting	--	--
WEPBL	West End Pit Blasting	643.03	117.35
BTBL	Bradley Tailings Blasting	--	--
STKP	PC Stockpile	--	--
FDRSF	Fiddle DRSF	--	--
HFDRSF	Hangar Flats DRSF	152.12	27.76
YPDRSF	Yellow Pine DRSF	--	--
WEDRSF	West End DRSF	--	--
HR000	Haul Roads	12,723.41	2,322.02
TSF	Tailing Storage Facility	--	--
ACCRD	Access Roads	38.10	6.95
UGEXP	Scout Portal	0.008	0.002
Total		13,894.82	2,535.81

TSF, ACCRD, UGEXP 38.11 6.95 chk 2535.81

HAP/TAP Emission Factors

CAS No.	Pollutant	ORE ppm[1]	DR ppm[1]	CR ppm[3]	HRD ppm[4]	Borrow ppm[5]	AR ppm
		Concentration					
7440-38-2	Arsenic	667	667	90	378.5	2.5	2.5
7440-41-7	Beryllium	3.2	3.2		3.2		3.2
7440-43-9	Cadmium	0.5	0.5		0.5		0.5
7440-48-4	Cobalt	4	4		4		4
7440-47-3	Chromium	9	9		9		9
7439-97-6	Mercury [2]	0.96	0.6		0.6		0.6
7439-96-5	Manganese	299	299		299		299
7440-02-0	Nickel	2	2		2		2
7439-92-1	Lead	8	8		8		8
7440-36-0	Antimony	23	23		23		23
7723-14-0	Phosphorus	650	650		650		650
7782-49-2	Selenium	0.4	0.4		0.4		0.4
7440-22-4	Silver	0.5	0.5		0.5		0.5
7429-90-5	Aluminum	71000	71000		71000		71000
7440-39-3	Barium	800	800		800		800
1317-65-3	Calcium Carbonate	14000	14000		14000		14000
7440-50-8	Copper	5	5		5		5
7439-89-6	Iron	18200	18200		18200		18200
7439-98-7	Molybdenum	1	1		1		1
7440-28-0	Thallium	10	10		10		10
7440-61-1	Uranium	10	10		10		10
7440-62-2	Vanadium	28	28		28		28
7440-33-7	Tungsten	10	10		10		10
7440-66-6	Zinc	35	35		35		35

[1] *(Midas Gold 2017c)* *Median concentration of 55,000 SGP samples.* *1E+6 parts/ppm*

[2] *(Midas Gold 2018e)* *Median ore and development rock (DR) concentrations of 151,000 samples; resource block model.*

[3] *(Perpetua 2021g)* *Median concentration of 265 SGP samples.*

[4] *HRD: haul road - emissions calculated based on 50% of the total VMT occuring on CR*

[5] *(ALS 2018)* *Median concentration of 8 SGP samples.*

DR DR DR DR DR DR DR DR ORE DR DR DR DR HRD DR/AR

MINING FUGITIVE EMISSIONS - CONTINUED **Model Scenario W3** DR **T-RACT Emissions**

HAP/TAP Emissions

Hourly [1] YPP_pph HFP_pph WEP_pph BT_pph YPPBL_pph HFPBL_pph WEPBL_pph BTBL_pph STKP_pph FDRSF_pph HFDRSF_pph YPDRSF_pph WEDRSF_pph HR000_pph CCRD, UGE lb/hr

CAS No.	Pollutant	YPP lb/hr	HFP lb/hr	WEP lb/hr	BT lb/hr	YPPBL lb/hr	HFPBL lb/hr	WEPBL lb/hr	BTBL lb/hr	STKP lb/hr	FDRSF lb/hr	HFDRSF lb/hr	YPDRSF lb/hr	WEDRSF lb/hr	HR000 lb/hr	TSF, ACCRD, UGEXP lb/hr	Total lb/hr
7440-38-2	Arsenic	0	0	9.4E-3	0	0	0	0.018	0	0	0	4.2E-3	0	0	0.201	4.2E-6	0.232
7440-41-7	Beryllium	0	0	4.5E-5	0	0	0	8.6E-5	0	0	0	2.0E-5	0	0	1.7E-3	5.1E-6	1.9E-3
7440-43-9	Cadmium	0	0	7.0E-6	0	0	0	1.3E-5	0	0	0	3.2E-6	0	0	2.7E-4	7.9E-7	2.9E-4
7440-48-4	Cobalt	0	0	5.6E-5	0	0	0	1.1E-4	0	0	0	2.5E-5	0	0	2.1E-3	6.4E-6	2.3E-3
7440-47-3	Chromium	0	0	1.3E-4	0	0	0	2.4E-4	0	0	0	5.7E-5	0	0	4.8E-3	1.4E-5	5.2E-3
7439-97-6	Mercury	0	0	8.5E-6	0	0	0	1.6E-5	0	0	0	3.8E-6	0	0	3.2E-4	9.5E-7	3.5E-4
7439-96-5	Manganese	0	0	4.2E-3	0	0	0	8.0E-3	0	0	0	1.9E-3	0	0	0.159	4.7E-4	0.173
7440-02-0	Nickel	0	0	2.8E-5	0	0	0	5.4E-5	0	0	0	1.3E-5	0	0	1.1E-3	3.2E-6	1.2E-3
7439-92-1	Lead	0	0	1.1E-4	0	0	0	2.1E-4	0	0	0	5.1E-5	0	0	4.2E-3	1.3E-5	4.6E-3
7440-36-0	Antimony	0	0	3.2E-4	0	0	0	6.2E-4	0	0	0	1.5E-4	0	0	0.012	3.7E-5	0.013
7723-14-0	Phosphorus	0	0	9.2E-3	0	0	0	0.017	0	0	0	4.1E-3	0	0	0.345	1.0E-3	0.376
7782-49-2	Selenium	0	0	5.6E-6	0	0	0	1.1E-5	0	0	0	2.5E-6	0	0	2.1E-4	6.4E-7	2.3E-4
7440-22-4	Silver	0	0	7.0E-6	0	0	0	1.3E-5	0	0	0	3.2E-6	0	0	2.7E-4	7.9E-7	2.9E-4
7429-90-5	Aluminum	0	0	1.000	0	0	0	1.902	0	0	0	0.450	0	0	37.640	0.113	41.106
7440-39-3	Barium	0	0	0.011	0	0	0	0.021	0	0	0	5.1E-3	0	0	0.424	1.3E-3	0.463
1317-65-3	Calcium Ca	0	0	0.197	0	0	0	0.375	0	0	0	0.089	0	0	7.422	0.022	8.105
7440-50-8	Copper	0	0	7.0E-5	0	0	0	1.3E-4	0	0	0	3.2E-5	0	0	2.7E-3	7.9E-6	2.9E-3
7439-89-6	Iron	0	0	0.256	0	0	0	0.488	0	0	0	0.115	0	0	9.649	0.029	10.537
7439-98-7	Molybdenu	0	0	1.4E-5	0	0	0	2.7E-5	0	0	0	6.3E-6	0	0	5.3E-4	1.6E-6	5.8E-4
7440-28-0	Thallium	0	0	1.4E-4	0	0	0	2.7E-4	0	0	0	6.3E-5	0	0	5.3E-3	1.6E-5	5.8E-3
7440-61-1	Uranium	0	0	1.4E-4	0	0	0	2.7E-4	0	0	0	6.3E-5	0	0	5.3E-3	1.6E-5	5.8E-3
7440-62-2	Vanadium	0	0	3.9E-4	0	0	0	7.5E-4	0	0	0	1.8E-4	0	0	0.015	4.4E-5	0.016
7440-33-7	Tungsten	0	0	1.4E-4	0	0	0	2.7E-4	0	0	0	6.3E-5	0	0	5.3E-3	1.6E-5	5.8E-3
7440-66-6	Zinc	0	0	4.9E-4	0	0	0	9.4E-4	0	0	0	2.2E-4	0	0	0.019	5.6E-5	0.020
Total		0	0	1.490	0	0	0	2.834	0	0	0	0.670	0	0	55.918	0.167	61.079

[1] *Hourly emissions are based on annual throughput for the carcinogenic annual risk TAPs and daily throughput for the non-carcinogenic 24-hr TAPs.* chk 61.0794 61.0794

DR DR DR DR DR DR DR DR ORE DR DR DR DR HRD DR/AR

MINING FUGITIVE EMISSIONS - CONTINUED **Model Scenario W3** DR **T-RACT Emissions**

HAP/TAP Emissions

Annual

		YPP_tpy	HFP_tpy	WEP_tpy	BT_tpy	YPPBL_tpy	HFPBL_tpy	WEPBL_tpy	BTBL_tpy	STKP_tpy	FDRSF_tpy	HFDRSF_tpy	YPDRSF_tpy	WEDRSF_tpy	HR000_tpy	CCRD, UGE	ton/yr
		YPP	HFP	WEP	BT	YPPBL	HFPBL	WEPBL	BTBL	STKP	FDRSF	HFDRSF	YPDRSF	WEDRSF	HR000	TSF, ACCRD, UGEXP	Total
CAS No.	Pollutant	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr
7440-38-2	Arsenic	0	0	0.041	0	0	0	0.078	0	0	0	0.019	0	0	0.879	1.8E-5	1.017
7440-41-7	Beryllium	0	0	2.0E-4	0	0	0	3.8E-4	0	0	0	8.9E-5	0	0	7.4E-3	2.2E-5	8.1E-3
7440-43-9	Cadmium	0	0	3.1E-5	0	0	0	5.9E-5	0	0	0	1.4E-5	0	0	1.2E-3	3.5E-6	1.3E-3
7440-48-4	Cobalt	0	0	2.5E-4	0	0	0	4.7E-4	0	0	0	1.1E-4	0	0	9.3E-3	2.8E-5	0.010
7440-47-3	Chromium	0	0	5.6E-4	0	0	0	1.1E-3	0	0	0	2.5E-4	0	0	0.021	6.3E-5	0.023
7439-97-6	Mercury	0	0	3.7E-5	0	0	0	7.0E-5	0	0	0	1.7E-5	0	0	1.4E-3	4.2E-6	1.5E-3
7439-96-5	Manganese	0	0	0.018	0	0	0	0.035	0	0	0	8.3E-3	0	0	0.694	2.1E-3	0.758
7440-02-0	Nickel	0	0	1.2E-4	0	0	0	2.3E-4	0	0	0	5.6E-5	0	0	4.6E-3	1.4E-5	5.1E-3
7439-92-1	Lead	0	0	4.9E-4	0	0	0	9.4E-4	0	0	0	2.2E-4	0	0	0.019	5.6E-5	0.020
7440-36-0	Antimony	0	0	1.4E-3	0	0	0	2.7E-3	0	0	0	6.4E-4	0	0	0.053	1.6E-4	0.058
7723-14-0	Phosphorus	0	0	0.040	0	0	0	0.076	0	0	0	0.018	0	0	1.509	4.5E-3	1.648
7782-49-2	Selenium	0	0	2.5E-5	0	0	0	4.7E-5	0	0	0	1.1E-5	0	0	9.3E-4	2.8E-6	1.0E-3
7440-22-4	Silver	0	0	3.1E-5	0	0	0	5.9E-5	0	0	0	1.4E-5	0	0	1.2E-3	3.5E-6	1.3E-3
7429-90-5	Aluminum	0	0	4.382	0	0	0	8.332	0	0	0	1.971	0	0	165	0.494	180
7440-39-3	Barium	0	0	0.049	0	0	0	0.094	0	0	0	0.022	0	0	1.858	5.6E-3	2.029
1317-65-3	Calcium Ca	0	0	0.864	0	0	0	1.643	0	0	0	0.389	0	0	32.508	0.097	35.501
7440-50-8	Copper	0	0	3.1E-4	0	0	0	5.9E-4	0	0	0	1.4E-4	0	0	0.012	3.5E-5	0.013
7439-89-6	Iron	0	0	1.123	0	0	0	2.136	0	0	0	0.505	0	0	42.261	0.127	46.152
7439-98-7	Molybdenu	0	0	6.2E-5	0	0	0	1.2E-4	0	0	0	2.8E-5	0	0	2.3E-3	7.0E-6	2.5E-3
7440-28-0	Thallium	0	0	6.2E-4	0	0	0	1.2E-3	0	0	0	2.8E-4	0	0	0.023	7.0E-5	0.025
7440-61-1	Uranium	0	0	6.2E-4	0	0	0	1.2E-3	0	0	0	2.8E-4	0	0	0.023	7.0E-5	0.025
7440-62-2	Vanadium	0	0	1.7E-3	0	0	0	3.3E-3	0	0	0	7.8E-4	0	0	0.065	1.9E-4	0.071
7440-33-7	Tungsten	0	0	6.2E-4	0	0	0	1.2E-3	0	0	0	2.8E-4	0	0	0.023	7.0E-5	0.025
7440-66-6	Zinc	0	0	2.2E-3	0	0	0	4.1E-3	0	0	0	9.7E-4	0	0	0.081	2.4E-4	0.089
Total		0	0	6.527	0	0	0	12.412	0	0	0	2.936	0	0	245	0.731	268
															chk	267.5280	267.5280

MINING FUGITIVE EMISSIONS - CONTINUED

Mercury Evaporative Flux Emissions

Fugitive Mercury Flux and Emissions

			Area		Hg Flux	Emissions[1] lb/hr	ton/yr	lb/yr
CAS No.	Pollutant	Source	m^2	ha	µg/m^2-yr			
		Stockpiles	52,623	5.3	556	7.37E-6	3.2E-5	6.5E-2
		Rock Dumps	2,063,990	206.4	76.2	3.96E-5	1.7E-4	0.35
		Tailings	1,338,158	133.8	2,144	7.22E-4	3.2E-3	6.32
		Pits	1,504,919	150.5	132.3	5.01E-5	2.2E-4	0.44
7439-97-6	Mercury					8.2E-4	3.6E-3	7.17

[1] *Hourly emissions based on:* 8,760 *hours per year of operation*

Fugitive Mercury Emission Factors

	Twin Creeks (TC)		Ore Hg Adjusted	Stibnite	
	Hg Flux [1]	Hg [2]	µg/m^2/yr	Hg Flux [3]	Hg [4]
Source	µg/m^2-yr	µg/g	TC	µg/m^2-yr	µg/g
Stockpiles	5,609	33	556	556	0.96
Rock Dumps	768	3.5	76.2	76.2	0.60
Tailings	21,621	33	2,144	2,144	0.96
Pits	1,334	9.5	132	132.3	0.60

[1] *(Eckley 2010)* *Table 1: Hg flux µg/m^2-yr*

[2] *(Eckley 2010)* *Table 1: Average Hg flux mg/g: " Stockpiles - high-grade stockpiles, Rock Dumps - waste rock dumps, Tailings - high-grade stockpiles as a surrogate; Pits - pit"*

[3] *(Eckley 2010)* *Figure 2: log(y) = m*log(x) + b*

y = Hg Flux (ng/m^2-d)
x = material Hg concentration (µg/g)]

Slope =	*Solar*	*TC*
	Low	*0.59*
	Medium	*0.6*
	High	*0.77*
	Average	*0.65*

[4] *(Midas Gold 2018e)*

Sample Calculation: m = log (y1/y2) / log(x1/x2)

m=	0.65	unitless
y1=	5,609	µg/m^2-yr
x1=	33	µg/m^2-yr
x2=	0.96	µg/m^2-yr
log(x1/x2)=	1.536243	unitless
log(y1/y2)=	1.003679	unitless
y1/y2=	10.08506	unitless
y2=	556.2	µg/m^2-yr

Conversions

2,000	lb/ton
10,000	m2/ha
453.593	g/lb

TABLE A-W3. HAP/TAP Emissions and Exemptions

T-RACT Emissions						MINING										LEACHING	
chk						*Mining*		*Model Scenario*	*W3*							*CN Leach/PAX*	
						YPP,HFP,WEP,BT		YPPBL,HFPBL,WEPBL,BTBL		HR000		STKP, FDRSF, HFDRSF, YPDRSF, WEDRSF		TSF,ACCRD,UGEXP			
CAS	HAP/TAP	HAP	TAP			Pits		Blasting		Haul Roads		Stockpiles and DRFS		Tails, Access Road, Exploration		CN Leach and PAX	
	NSPS or NESHAP HAP/TAP -->			*Y*													
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				A/C	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
7440-38-2	Arsenic	Y	Y	Y	C	9.4E-3	0.041	0.018	0.078	0.201	0.879	4.2E-3	0.019	4.2E-6	1.8E-5		
7440-41-7	Beryllium	Y	Y	Y	C	4.5E-5	2.0E-4	8.6E-5	3.8E-4	1.7E-3	7.4E-3	2.0E-5	8.9E-5	5.1E-6	2.2E-5		
7440-43-9	Cadmium	Y	Y	Y	C	7.0E-6	3.1E-5	1.3E-5	5.9E-5	2.7E-4	1.2E-3	3.2E-6	1.4E-5	7.9E-7	3.5E-6		
50-00-0	Formaldehyde	Y	Y	Y	C												
7440-02-0	Nickel	Y	Y	Y	C	2.8E-5	1.2E-4	5.4E-5	2.3E-4	1.1E-3	4.6E-3	1.3E-5	5.6E-5	3.2E-6	1.4E-5		

TABLE A-W3. HAP/TAP Emissions and Exemptions

T-RACT Emissions						PROCESSING AND PRODUCTION											
chk						*Ore Processing*				*Ore Concentration and Refining*				*Process Heating*			
						OC1-13		PS		AC		EW,MR,MF,CKD		ACB, CKB, PV, HS		LKC	
CAS	HAP/TAP	HAP	TAP			Crushers & Xfers		Prill Silos		Autoclave		EW, Preg Tank, Retort, Furnace, Carbon Kiln		POX Boiler, C. Kiln Comb., Prop. Vap., Sol'n Heater		Lime Kiln Combustion	
	NSPS or NESHAP HAP/TAP -->			*Y*		***LL***	***LL***			***7E***	***7E***	***7E***	***7E***			***5A***	***5A***
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				**A/C**	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
7440-38-2	Arsenic	Y	Y	Y	C	3.9E-3	0.017			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.5E-6	6.4E-6	3.7E-6	1.6E-5
7440-41-7	Beryllium	Y	Y	Y	C	1.9E-5	8.2E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	8.7E-8	3.8E-7	2.2E-7	9.6E-7
7440-43-9	Cadmium	Y	Y	Y	C	2.9E-6	1.3E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	8.0E-6	3.5E-5	2.0E-5	8.8E-5
50-00-0	Formaldehyde	Y	Y	Y	C									5.5E-4	2.4E-3	1.4E-3	6.0E-3
7440-02-0	Nickel	Y	Y	Y	C	1.2E-5	5.2E-5			2.3E-5	1.0E-4	3.8E-4	1.7E-3	1.5E-5	6.7E-5	3.9E-5	1.7E-4

TABLE A-W3. HAP/TAP Emissions and Exemptions

T-RACT Emissions						PROCESSING AND PRODUCTION - Continued													
chk						*Lime Production*						*Aggregate Prod.*		*Concrete Production*					
						LS1-11,LSBM		LK,LS12,LCR,LS-L/U		LS1-L/U,MillS2-L/U,ACS1-4		PCSP1,PCSP2		CM		CS1L,CS1U,CS2L, CS2U		CA-L/U	
CAS	HAP/TAP	HAP	TAP			Limestone Crushers, Screens, Mill, Xfers		Lime Kiln, Kiln Feed, Lime Mill, Pebble Lime Silo		Lime Silos and Lime Mill Crushing		Portable Crushers, Screens, Xfers		Central Mixer		Cement Silo #1 and #2 L/U		Aggregate Bin	
	NSPS or NESHAP HAP/TAP -->			*Y*		*OOO*	*OOO*	*5A*	*5A*			*OOO*	*OOO*					*OOO*	*OOO*
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
7440-38-2	Arsenic	Y	Y	Y	C	1.0E-4	4.4E-4	2.4E-5	1.1E-4	1.1E-6	4.7E-6	2.9E-5	1.3E-4	2.0E-6	8.9E-6	1.2E-7	5.1E-7	1.8E-5	7.9E-5
7440-41-7	Beryllium	Y	Y	Y	C	3.5E-6	1.5E-5	8.4E-7	3.7E-6	3.7E-8	1.6E-7	1.0E-6	4.4E-6			1.3E-8	5.8E-8	6.3E-7	2.8E-6
7440-43-9	Cadmium	Y	Y	Y	C	1.1E-6	4.8E-6	2.6E-7	1.2E-6	1.2E-8	5.1E-8	3.1E-7	1.4E-6	4.9E-9	2.1E-8			2.0E-7	8.6E-7
50-00-0	Formaldehyde	Y	Y	Y	C														
7440-02-0	Nickel	Y	Y	Y	C	2.2E-5	9.6E-5	5.3E-6	2.3E-5	2.3E-7	1.0E-6	6.3E-6	2.7E-5	1.7E-6	7.4E-6	1.1E-6	5.0E-6	3.9E-6	1.7E-5

TABLE A-W3. HAP/TAP Emissions and Exemptions

T-RACT Emissions						PROCESSING AND PRODUCTION - Continued						MINING and LEACHING - Totals									
chk						*HVAC*		*Emer. Power/Fire*		*Fuel Storage*		*HAP Total*		*Mercury Total*		*Mercury Total*		*TAP Total*		*TAP Total*	
						H1M,H2M,HM,HAC,HR,HA,HMO,HTS,HW		EDG1,EDG2,EDG3,EDFP		TG1,TG2				*Exempt*		*Non-Exempt*		*HAP-TAP addressed by NSPS/NESHAP*		*For EL Evaluation*	
CAS	HAP/TAP	HAP	TAP			Heaters		Emergency Generators and Fire Pump		Gasoline Fuel Tanks											
	NSPS or NESHAP HAP/TAP -->			*Y*				*4Z*	*4Z*	*6C*	*6C*										
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
7440-38-2	Arsenic	Y	Y	Y	C	3.6E-6	1.6E-5					0.232	1.017							0.232	1.017
7440-41-7	Beryllium	Y	Y	Y	C	2.1E-7	9.4E-7					1.9E-3	8.1E-3							1.9E-3	8.1E-3
7440-43-9	Cadmium	Y	Y	Y	C	2.0E-5	8.6E-5					2.9E-4	1.3E-3							2.9E-4	1.3E-3
50-00-0	Formaldehyde	Y	Y	Y	C	1.3E-3	5.9E-3	5.1E-5	2.2E-4												
7440-02-0	Nickel	Y	Y	Y	C	3.8E-5	1.6E-4					1.2E-3	5.1E-3					0	0	1.2E-3	5.1E-3

TABLE A-W3. HAP/TAP Emissions and Exemptions

T-RACT Emissions						PROCESSING AND PRODUCTION - Totals										ALL	ALL	ALL	TAP EL	
chk						*HAP Total*		*Mercury Total Exempt*		*Mercury Total Non-Exempt*		*TAP Total HAP-TAP addressed by NSPS/NESHAP*		*TAP Total For EL Evaluation*		*HAP*	*Hg Non-Exempt*	*TAP For EL Evaluation*	*TAP Emission Screening Level (EL)*	
CAS	HAP/TAP	HAP	TAP																	
	NSPS or NESHAP HAP/TAP -->	*Y*																	Non-car	Carcin
	Non-Carcinogenic Acute (A) or Carcinogenic (C) -->				*A/C*	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	ton/yr	ton/yr	lb/hr	lb/hr	lb/hr
7440-38-2	Arsenic	Y	Y	Y	C	4.5E-3	0.020					4.5E-3	0.020	8.2E-6	3.6E-5	1.037		0.232	--	1.5E-6
7440-41-7	Beryllium	Y	Y	Y	C	4.3E-4	1.9E-3					4.3E-4	1.9E-3	3.5E-7	1.5E-6	0.010		1.9E-3	--	2.8E-5
7440-43-9	Cadmium	Y	Y	Y	C	4.6E-4	2.0E-3					4.3E-4	1.9E-3	2.8E-5	1.2E-4	3.3E-3		3.2E-4	--	3.7E-6
50-00-0	Formaldehyde	Y	Y	Y	C	3.3E-3	0.015					1.4E-3	6.2E-3	1.9E-3	8.3E-3	0.015		1.9E-3	--	5.1E-4
7440-02-0	Nickel	Y	Y	Y	C	5.5E-4	2.4E-3					4.9E-4	2.2E-3	5.6E-5	2.4E-4	7.5E-3		1.2E-3	--	2.7E-5

Appendix B – Modeled Emissions per Modeling Scenario and Source

Appendix B Table of Contents

Non-Carcinogenic TAP Modeling

Carcinogenic TAP Modeling

TABLE B-Y1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-Y1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-Y1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: Y1	YPP	Yellow Pine Pit	0	0.024	0.051	5.585	0.063	1.101
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	4.5E-3	9.7E-3	1.063	0.012	0.210
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.065	0.141	15.394	0.173	3.035
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.102**	**0.220**	**24.705**	**0.278**	**6.987**

TABLE B-Y1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-Y1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-Y1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: Y1	YPP	Yellow Pine Pit	0	1.432	0	7.9E-4	2.2E-3
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0.272	0	1.5E-4	4.2E-4
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	3.946	0	2.2E-3	6.1E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**6.380**	**2.030**	**3.9E-3**	**0.010**

TABLE B-Y2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-Y2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-Y2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: Y2	YPP	Yellow Pine Pit	0	0.024	0.051	5.585	0.063	1.101
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.096	0.208	22.711	0.256	4.478
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.131**	**0.285**	**31.817**	**0.358**	**8.390**

TABLE B-Y2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-Y2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-Y2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: Y2	YPP	Yellow Pine Pit	0	1.432	0	7.9E-4	2.2E-3
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0.220	0	1.2E-4	3.4E-4
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	5.822	0	3.2E-3	9.0E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**8.203**	**2.030**	**4.9E-3**	**0.013**

TABLE B-Y3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-Y3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-Y3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: Y3	YPP	Yellow Pine Pit	0	0.024	0.051	5.585	0.063	1.101
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.155	0.337	36.835	0.415	7.263
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.191**	**0.415**	**45.941**	**0.517**	**11.175**

TABLE B-Y3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-Y3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-Y3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: Y3	YPP	Yellow Pine Pit	0	1.432	0	7.9E-4	2.2E-3
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0.220	0	1.2E-4	3.4E-4
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	9.442	0	5.2E-3	0.015
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**11.823**	**2.030**	**6.9E-3**	**0.019**

TABLE B-H1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-H1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-H1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: H1	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0.024	0.051	5.585	0.063	1.101
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	4.5E-3	9.7E-3	1.063	0.012	0.210
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.105	0.228	24.940	0.281	4.918
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.142**	**0.308**	**34.252**	**0.385**	**8.870**

TABLE B-H1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-H1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-H1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: H1	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	1.432	0	7.9E-4	2.2E-3
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0.272	0	1.5E-4	4.2E-4
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	6.393	0	3.5E-3	9.8E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**8.827**	**2.030**	**5.2E-3**	**0.014**

TABLE B-H2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-H2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-H2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: H2	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0.024	0.051	5.585	0.063	1.101
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.157	0.342	37.334	0.421	7.362
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.193**	**0.419**	**46.440**	**0.523**	**11.273**

TABLE B-H2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-H2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-H2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: H2	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	1.432	0	7.9E-4	2.2E-3
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0.220	0	1.2E-4	3.4E-4
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	9.570	0	5.3E-3	0.015
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**11.951**	**2.030**	**7.0E-3**	**0.019**

TABLE B-H3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-H3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-H3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: H3	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0.024	0.051	5.585	0.063	1.101
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.096	0.209	22.854	0.258	4.506
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.132**	**0.287**	**31.960**	**0.360**	**8.418**

TABLE B-H3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-H3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-H3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: H3	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	1.432	0	7.9E-4	2.2E-3
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0.220	0	1.2E-4	3.4E-4
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	5.858	0	3.2E-3	9.0E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**8.239**	**2.030**	**4.9E-3**	**0.013**

TABLE B-H4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-H4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-H4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: H4	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0.024	0.051	5.585	0.063	1.101
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.123	0.268	29.277	0.330	5.773
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.159**	**0.346**	**38.383**	**0.432**	**9.685**

TABLE B-H4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-H4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-H4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: H4	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	1.432	0	7.9E-4	2.2E-3
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0.220	0	1.2E-4	3.4E-4
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	7.505	0	4.1E-3	0.012
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**9.886**	**2.030**	**5.8E-3**	**0.016**

TABLE B-W1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-W1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-W1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: W1	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0.024	0.051	5.585	0.063	1.101
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	4.5E-3	9.7E-3	1.063	0.012	0.210
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.090	0.196	21.435	0.242	4.227
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.127**	**0.276**	**30.746**	**0.346**	**8.179**

TABLE B-W1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-W1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-W1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: W1	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	1.432	0	7.9E-4	2.2E-3
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0.272	0	1.5E-4	4.2E-4
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	5.495	0	3.0E-3	8.5E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**7.928**	**2.030**	**4.8E-3**	**0.013**

TABLE B-W2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-W2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-W2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: W2	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0.024	0.051	5.585	0.063	1.101
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.145	0.316	34.484	0.389	6.800
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.181**	**0.393**	**43.590**	**0.491**	**10.711**

TABLE B-W2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-W2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-W2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: W2	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	1.432	0	7.9E-4	2.2E-3
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0.220	0	1.2E-4	3.4E-4
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	8.840	0	4.9E-3	0.014
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**11.221**	**2.030**	**6.6E-3**	**0.018**

TABLE B-W3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-W3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-W3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: W3	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0.024	0.051	5.585	0.063	1.101
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.208	0.452	49.397	0.557	9.740
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.244**	**0.530**	**58.504**	**0.659**	**13.652**

TABLE B-W3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-W3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-W3. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: W3	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	1.432	0	7.9E-4	2.2E-3
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0.220	0	1.2E-4	3.4E-4
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	12.662	0	7.0E-3	0.019
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**15.043**	**2.030**	**8.7E-3**	**0.024**

TABLE B-W4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-W4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-W4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: W4	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0.024	0.051	5.585	0.063	1.101
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.094	0.204	22.281	0.251	4.393
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.130**	**0.282**	**31.387**	**0.353**	**8.305**

TABLE B-W4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-W4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-W4. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: W4	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	1.432	0	7.9E-4	2.2E-3
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0.220	0	1.2E-4	3.4E-4
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	5.711	0	3.1E-3	8.8E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**8.092**	**2.030**	**4.8E-3**	**0.013**

TABLE B-W5. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-W5. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-W5. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: W5	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0.024	0.051	5.585	0.063	1.101
	BT	Bradley Tailings	0	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	BTBL	Bradley Tailings Blasting	0	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	HR000	Haul Roads	0	0.104	0.225	24.595	0.277	4.850
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.139**	**0.303**	**33.702**	**0.379**	**8.761**

TABLE B-W5. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-W5. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-W5. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: W5	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	1.432	0	7.9E-4	2.2E-3
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0.488	0	2.7E-4	7.5E-4
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0.220	0	1.2E-4	3.4E-4
	HR000	Haul Roads	0	6.305	0	3.5E-3	9.7E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**8.686**	**2.030**	**5.2E-3**	**0.014**

TABLE B-B1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-B1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-B1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: B1	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0.023	0.051	5.567	0.063	1.098
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	STKP	PC Stockpile	0	4.5E-3	9.7E-3	1.063	0.012	0.210
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.120	0.260	28.394	0.320	5.599
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.156**	**0.339**	**37.687**	**0.424**	**9.547**

TABLE B-B1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-B1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-B1. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: B1	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	1.427	0	7.8E-4	2.2E-3
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0.488	0	2.7E-4	7.5E-4
	STKP	PC Stockpile	0	0.272	0	1.5E-4	4.2E-4
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	7.278	0	4.0E-3	0.011
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**9.707**	**2.030**	**5.7E-3**	**0.015**

TABLE B-B2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8 (24-hr) lb/hr	Manganese 7439-96-5 (24-hr) lb/hr	Phosphorus 7723-14-0 (24-hr) lb/hr	Aluminum 7429-90-5 (24-hr) lb/hr	Barium 7440-39-3 (24-hr) lb/hr	Calcium Carbonate 1317-65-3 (24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to		LL	LL	0.010	1.2E-4	2.0E-3
	OC2	Grizzly to Apron Feeder		LL	LL	0.010	1.2E-4	2.0E-3
	OC3	Apron Feeder to Dribble Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC4	Apron Feeder to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC5	Dribble Conveyor to Vibrating Grizzly		LL	LL	0.010	1.2E-4	2.0E-3
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor		LL	LL	0.010	1.2E-4	2.0E-3
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor		LL	LL	0.089	1.0E-3	0.018
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile		LL	LL	0.010	1.2E-4	2.0E-3
	OC9	Stockpile Transfers to Reclaim Conveyors		LL	LL	0.049	5.5E-4	9.7E-3
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor		LL	LL	0.049	5.5E-4	9.7E-3
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	LL	LL	0.049	5.5E-4	9.7E-3
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	LL	LL	0.098	1.1E-3	0.019
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	LL	LL	0.011	1.3E-4	2.3E-3
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0.221	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	7E	7E	2.3E-5	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MR	Mercury Retort	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	7E	7E	9.6E-5	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	2.6E-7	0	0	3.1E-6	0
	CKB	Carbon Regeneration Kiln (Burners)	0	8.4E-7	0	0	9.7E-6	0
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	3.7E-8	0	0	4.3E-7	0
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	1.9E-6	0	0	2.2E-5	0
	LKC	PFR Shaft Lime Kiln Combustion	0	5A	5A	0	9.5E-5	0
	LS1	Limestone transfer to Primary Crusher Hopper	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS2	Primary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS3	Primary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323
	LS4	Secondary Crushing and Associated Transfers In and Out	0	OOO	OOO	5.7E-3	3.7E-5	0.070
	LS5	Secondary Screening and Associated Transfers In and Out	0	OOO	OOO	0.027	1.7E-4	0.323

TABLE B-B2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LS8	Ball Mill Feed transfer to Ball	0	OOO	OOO	3.2E-3	2.0E-5	0.039
	LSBM	Limestone Ball Mill	0	OOO	OOO	0.043	2.8E-4	0.522
	LS9	Limestone transfer to Kiln Feed Bin	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	OOO	OOO	7.5E-4	4.8E-6	9.2E-3
	LS11	Fines Screening and Associated Transfers In and Out	0	OOO	OOO	6.3E-3	4.0E-5	0.076
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	5A	5A	7.5E-4	4.8E-6	9.2E-3
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	5A	5A	0.021	1.3E-4	0.251
	LCR	Lime Mill Crushing and associated transfers In and Out	0	5A	5A	6.4E-3	4.1E-5	0
	LSL	Pebble Lime Silo Loading via Bucket Elevator	0	5A	5A	1.4E-4	9.0E-7	0
	LSU	Pebble Lime Silo discharge to Lime Slaker	0	5A	5A	1.4E-5	9.0E-8	0
	LS1L	Mill Lime Silo #1 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	MillS2L	Mill Lime Silo #2 Loading	0	2.4E-6	1.3E-6	2.3E-4	1.5E-6	0
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0	1.2E-5	6.5E-6	1.1E-3	7.3E-6	0
	ACS1L	AC Lime Silo #1 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS2L	AC Lime Silo #2 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS3L	AC Lime Silo #3 Loading	0	9.8E-6	5.4E-6	9.3E-4	6.0E-6	0
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
	ACS4L	AC Lime Silo #4 Loading	0	4.9E-6	2.7E-6	4.7E-4	3.0E-6	0
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0	2.3E-5	1.2E-5	2.2E-3	1.4E-5	0
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	OOO	OOO	0.014	9.1E-5	0.172
Concrete Production	CM	Central Mixer Loading	0	2.6E-5	8.2E-6	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	8.0E-7	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	8.0E-7	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	8.0E-7	0	0	0	0

TABLE B-B2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Cyanide 592-01-8	Manganese 7439-96-5	Phosphorus 7723-14-0	Aluminum 7429-90-5	Barium 7440-39-3	Calcium Carbonate 1317-65-3
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	8.0E-7	0	0	0	0
	CAL	Aggregate Bin Loading	0	OOO	OOO	0.016	1.0E-4	0
	CAU	Aggregate Bin Unloading	0	OOO	OOO	0.016	1.0E-4	0
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	1.5E-6	0	0	1.7E-5	0
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	9.3E-8	0	0	1.1E-6	0
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	1.9E-7	0	0	2.2E-6	0
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	7.5E-7	0	0	8.6E-6	0
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	1.1E-6	0	0	1.3E-5	0
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	4Z	4Z	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	4Z	4Z	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	6C	6C	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	6C	6C	0	0	0
Mining - Modeling Scenario: B2	YPP	Yellow Pine Pit	0	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0	0
	BT	Bradley Tailings	0	0.023	0.051	5.567	0.063	1.098
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	8.0E-3	0.017	1.902	0.021	0.375
	STKP	PC Stockpile	0	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	3.6E-3	7.9E-3	0.858	9.7E-3	0.169
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0	0
	HR000	Haul Roads	0	0.028	0.061	6.713	0.076	1.324
	TSF	Tailing Storage Facility	0.232	0	0	0	0	0
	ACCRD	Access Roads	0	4.7E-4	1.0E-3	0.113	1.3E-3	0.022
	UGEXP	Scout Portal	0	1.0E-7	2.3E-7	2.5E-5	2.8E-7	4.9E-6
		Total	**0.453**	**0.064**	**0.139**	**15.801**	**0.178**	**5.232**

TABLE B-B2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	0	2.7E-3	0	1.5E-6	4.1E-6
	OC2	Grizzly to Apron Feeder	0	2.7E-3	0	1.5E-6	4.1E-6
	OC3	Apron Feeder to Dribble Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC4	Apron Feeder to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC5	Dribble Conveyor to Vibrating Grizzly	0	2.7E-3	0	1.5E-6	4.1E-6
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	0	2.7E-3	0	1.5E-6	4.1E-6
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	0	0.023	0	1.3E-5	3.5E-5
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	0	2.7E-3	0	1.5E-6	4.1E-6
	OC9	Stockpile Transfers to Reclaim Conveyors	0	0.013	0	6.9E-6	1.9E-5
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	0	0.013	0	6.9E-6	1.9E-5
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	0	0.013	0	6.9E-6	1.9E-5
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	0	0.025	0	1.4E-5	3.9E-5
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	0	2.9E-3	0	1.6E-6	4.5E-6
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	0	2.3E-5	2.030	2.3E-5	2.3E-5
	EW	Electrowinning Cells and Pregnant Solution Tank	0	9.6E-5	0	9.6E-5	9.6E-5
	MR	Mercury Retort	0	9.6E-5	0	9.6E-5	9.6E-5
	MF	Induction Melting Furnace	0	9.6E-5	0	9.6E-5	9.6E-5
	CKD	Carbon Regeneration Kiln (Drum)	0	9.6E-5	0	9.6E-5	9.6E-5
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	0	0	0	0	1.6E-6
	CKB	Carbon Regeneration Kiln (Burners)	0	0	0	0	5.1E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	0	0	0	0	2.3E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	0	0	0	0	1.1E-5
	LKC	PFR Shaft Lime Kiln Combustion	0	0	0	0	5.0E-5
	LS1	Limestone transfer to Primary Crusher Hopper	0	1.5E-3	0	7.1E-7	2.2E-6
	LS2	Primary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS3	Primary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5
	LS4	Secondary Crushing and Associated Transfers In and Out	0	2.6E-3	0	1.3E-6	3.9E-6
	LS5	Secondary Screening and Associated Transfers In and Out	0	0.012	0	5.9E-6	1.8E-5

TABLE B-B2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	0	1.5E-3	0	7.1E-7	2.2E-6
	LS7	Limestone transfer to Ball Mill Feed Conveyor	0	1.5E-3	0	7.1E-7	2.2E-6
	LS8	Ball Mill Feed transfer to Ball	0	1.5E-3	0	7.1E-7	2.2E-6
	LSBM	Limestone Ball Mill	0	0.020	0	9.5E-6	2.9E-5
	LS9	Limestone transfer to Kiln Feed Bin	0	3.5E-4	0	1.7E-7	5.2E-7
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	0	3.5E-4	0	1.7E-7	5.2E-7
	LS11	Fines Screening and Associated Transfers In and Out	0	2.9E-3	0	1.4E-6	4.3E-6
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	0	3.5E-4	0	1.7E-7	5.2E-7
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	0	9.5E-3	0	4.6E-6	1.4E-5
	LCR	Lime Mill Crushing and associated transfers In and Out	0.211	2.9E-3	0	1.4E-6	4.4E-6
	LSL	Pebble Lime Silo Loading via Bucket Elevator	4.6E-3	6.4E-5	0	3.1E-8	9.6E-8
	LSU	Pebble Lime Silo discharge to Lime Slaker	4.6E-4	6.4E-6	0	3.1E-9	9.6E-9
	LS1L	Mill Lime Silo #1 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	MillS2L	Mill Lime Silo #2 Loading	7.6E-3	1.1E-4	0	5.2E-8	1.6E-7
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	0.037	5.2E-4	0	2.5E-7	7.8E-7
	ACS1L	AC Lime Silo #1 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS2L	AC Lime Silo #2 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS3L	AC Lime Silo #3 Loading	0.031	4.3E-4	0	2.1E-7	6.4E-7
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
	ACS4L	AC Lime Silo #4 Loading	0.015	2.1E-4	0	1.0E-7	3.2E-7
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	0.071	9.9E-4	0	4.8E-7	1.5E-6
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	0	6.5E-3	0	3.1E-6	9.7E-6
Concrete Production	CM	Central Mixer Loading	0	0	0	0	0
	CS1L	Cement/Shotcrete Silo #1 Loading	0	0	0	0	0
	CS1U	Cement/Shotcrete Silo #1 Unloading	0	0	0	0	0
	CS2L	Cement/Shotcrete Silo #2 Loading	0	0	0	0	0

TABLE B-B2. TAPs that Exceed the EL by Source chk **180,000 T/day Emissions**

	Source ID	Source Description	Calcium Oxide 1305-78-8	Iron 7439-89-6	Sulfuric Acid 7664-93-9	Thallium 7440-28-0	Vanadium 7440-62-2
			(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr	(24-hr) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	0	0	0	0	0
	CAL	Aggregate Bin Loading	0	7.1E-3	0	3.5E-6	1.1E-5
	CAU	Aggregate Bin Unloading	0	7.1E-3	0	3.5E-6	1.1E-5
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	0	0	0	0	9.0E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	0	0	0	0	9.0E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	0	0	0	0	5.6E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	0	0	0	0	1.1E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	0	0	0	0	4.5E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	0	0	0	0	6.8E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	0	0	0	0	0
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	0	0	0	0	0
Fuel Storage	TG1	Mine Site Gasoline Tank #1	0	0	0	0	0
	TG2	Mine Site Gasoline Tank #2	0	0	0	0	0
Mining - Modeling Scenario: B2	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	1.427	0	7.8E-4	2.2E-3
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0.488	0	2.7E-4	7.5E-4
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0.220	0	1.2E-4	3.4E-4
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0	1.721	0	9.5E-4	2.6E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	0	0.029	0	1.6E-5	4.4E-5
	UGEXP	Scout Portal	0	6.4E-6	0	3.5E-9	9.8E-9
		Total	**0.696**	**4.097**	**2.030**	**2.7E-3**	**6.8E-3**

TABLE B-Y1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-Y1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-Y1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: Y1	YPP	Yellow Pine Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	5.7E-3	2.7E-5	4.3E-6	0	1.7E-5
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.065	5.5E-4	8.5E-5	0	3.4E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.098**	**7.1E-4**	**1.4E-4**	**1.9E-3**	**5.0E-4**

TABLE B-Y2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-Y2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-Y2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: Y2	YPP	Yellow Pine Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.094	7.9E-4	1.2E-4	0	5.0E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.125**	**9.5E-4**	**1.8E-4**	**1.9E-3**	**6.5E-4**

TABLE B-Y3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-Y3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-Y3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: Y3	YPP	Yellow Pine Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.150	1.3E-3	2.0E-4	0	7.9E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.182**	**1.4E-3**	**2.5E-4**	**1.9E-3**	**9.5E-4**

TABLE B-H1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-H1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-H1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: H1	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	5.7E-3	2.7E-5	4.3E-6	0	1.7E-5
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.103	8.7E-4	1.4E-4	0	5.4E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.136**	**1.0E-3**	**1.9E-4**	**1.9E-3**	**7.0E-4**

TABLE B-H2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-H2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-H2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: H2	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.152	1.3E-3	2.0E-4	0	8.1E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.184**	**1.4E-3**	**2.5E-4**	**1.9E-3**	**9.6E-4**

TABLE B-H3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-H3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-H3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: H3	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.095	8.0E-4	1.2E-4	0	5.0E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.126**	**9.6E-4**	**1.8E-4**	**1.9E-3**	**6.5E-4**

TABLE B-H4. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-H4. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-H4. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: H4	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.120	1.0E-3	1.6E-4	0	6.4E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.152**	**1.2E-3**	**2.1E-4**	**1.9E-3**	**7.9E-4**

TABLE B-W1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-W1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-W1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: W1	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	5.7E-3	2.7E-5	4.3E-6	0	1.7E-5
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.089	7.5E-4	1.2E-4	0	4.7E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.122**	**9.1E-4**	**1.7E-4**	**1.9E-3**	**6.3E-4**

TABLE B-W2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-W2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-W2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: W2	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.141	1.2E-3	1.9E-4	0	7.5E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.173**	**1.3E-3**	**2.4E-4**	**1.9E-3**	**9.0E-4**

TABLE B-W3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-W3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-W3. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: W3	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.201	1.7E-3	2.7E-4	0	1.1E-3
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.232**	**1.9E-3**	**3.2E-4**	**1.9E-3**	**1.2E-3**

TABLE B-W4. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-W4. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-W4. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: W4	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.092	7.8E-4	1.2E-4	0	4.9E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.124**	**9.4E-4**	**1.7E-4**	**1.9E-3**	**6.4E-4**

TABLE B-W5. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-W5. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-W5. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: W5	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	9.4E-3	4.5E-5	7.0E-6	0	2.8E-5
	BT	Bradley Tailings	0	0	0	0	0
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	BTBL	Bradley Tailings Blasting	0	0	0	0	0
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	HR000	Haul Roads	0.101	8.6E-4	1.3E-4	0	5.4E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.133**	**1.0E-3**	**1.9E-4**	**1.9E-3**	**6.9E-4**

TABLE B-B1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-B1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-B1. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: B1	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	9.2E-3	4.4E-5	6.9E-6	0	2.8E-5
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	STKP	PC Stockpile	5.7E-3	2.7E-5	4.3E-6	0	1.7E-5
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	0	0	0	0	0
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.117	9.9E-4	1.5E-4	0	6.2E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.149**	**1.1E-3**	**2.1E-4**	**1.9E-3**	**7.7E-4**

TABLE B-B2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Ore Processing	OC1	Loader Transfer of Ore to	LL	LL	LL	LL	LL
	OC2	Grizzly to Apron Feeder	LL	LL	LL	LL	LL
	OC3	Apron Feeder to Dribble Conveyor	LL	LL	LL	LL	LL
	OC4	Apron Feeder to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC5	Dribble Conveyor to Vibrating Grizzly	LL	LL	LL	LL	LL
	OC6	Vibrating Grizzly to Primary Crusher or Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC7	Primary Crusher and Associated Transfers out to Coarse Ore Stockpile Feed Conveyor	LL	LL	LL	LL	LL
	OC8	Coarse Ore Stockpile Feed Conveyor Transfer to Stockpile	LL	LL	LL	LL	LL
	OC9	Stockpile Transfers to Reclaim Conveyors	LL	LL	LL	LL	LL
	OC10	Reclaim Conveyors to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	OC11	SAG Mill Feed Conveyor Transfer to SAG Mill	LL	LL	LL	LL	LL
	OC12	Pebble Crusher and Associated Transfers in (from SAG Mill) and out (to Pebble Discharge Conveyor)	LL	LL	LL	LL	LL
	OC13	Pebble Discharge Conveyor to SAG Mill Feed Conveyor	LL	LL	LL	LL	LL
	PSL	Prill Silos Loading (2 x 100 ton)	0	0	0	0	0
	PSU	Prill Silos Unloading (2 x 100	0	0	0	0	0
Mill Leaching	MILLTAN	Mill Leaching	0	0	0	0	0
Ore Concentration and Refining	AC	Autoclave	7E	7E	7E	7E	7E
	EW	Electrowinning Cells and Pregnant Solution Tank	7E	7E	7E	7E	7E
	MR	Mercury Retort	7E	7E	7E	7E	7E
	MF	Induction Melting Furnace	7E	7E	7E	7E	7E
	CKD	Carbon Regeneration Kiln (Drum)	7E	7E	7E	7E	7E
Process Heating	ACB	POX Boiler (17 MMBtu/hr Propane-Fired)	1.3E-7	7.7E-9	7.0E-7	4.8E-5	1.3E-6
	CKB	Carbon Regeneration Kiln (Burners)	4.1E-7	2.4E-8	2.2E-6	1.5E-4	4.3E-6
	PV	Propane Vaporizer (0.1 MMBtu/hr Propane-Fired)	1.8E-8	1.1E-9	9.9E-8	6.8E-6	1.9E-7
	HS	Strip Circuit Solution Heater (5 MMBtu, Propane-Fired)	9.0E-7	5.4E-8	5.0E-6	3.4E-4	9.5E-6
	LKC	PFR Shaft Lime Kiln Combustion	5A	5A	5A	5A	5A
	LS1	Limestone transfer to Primary Crusher Hopper	OOO	OOO	OOO	OOO	OOO
	LS2	Primary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS3	Primary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS4	Secondary Crushing and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS5	Secondary Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO

TABLE B-B2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
Lime Production	LS6	Limestone transfer to Ball Mill Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS7	Limestone transfer to Ball Mill Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS8	Ball Mill Feed transfer to Ball	OOO	OOO	OOO	OOO	OOO
	LSBM	Limestone Ball Mill	OOO	OOO	OOO	OOO	OOO
	LS9	Limestone transfer to Kiln Feed Bin	OOO	OOO	OOO	OOO	OOO
	LS10	Limestone transfer to Lime Kiln Feed Conveyor	OOO	OOO	OOO	OOO	OOO
	LS11	Fines Screening and Associated Transfers In and Out	OOO	OOO	OOO	OOO	OOO
	LS12	Kiln Feed transfer to PFR Shaft Lime Kiln	5A	5A	5A	5A	5A
	LK	Parallel Flow Regenerative (PFR) Shaft Lime Kiln	5A	5A	5A	5A	5A
	LCR	Lime Mill Crushing and associated transfers In and Out	5A	5A	5A	5A	5A
	LSL	Pebble Lime Silo Loading via Bucket Elevator	5A	5A	5A	5A	5A
	LSU	Pebble Lime Silo discharge to Lime Slaker	5A	5A	5A	5A	5A
	LS1L	Mill Lime Silo #1 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	LS1U	Mill Lime Silo #1 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	MillS2L	Mill Lime Silo #2 Loading	1.1E-8	4.0E-10	1.2E-10	0	2.5E-9
	MillS2U	Mill Lime Silo #2 Unloading to SAG Mill Conveyor	5.5E-8	1.9E-9	6.0E-10	0	1.2E-8
	ACS1L	AC Lime Silo #1 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS1U	AC Lime Silo #1 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS2L	AC Lime Silo #2 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS2U	AC Lime Silo #2 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS3L	AC Lime Silo #3 Loading	4.5E-8	1.6E-9	4.9E-10	0	9.9E-9
	ACS3U	AC Lime Silo #3 Unloading to Lime Slaker	2.2E-7	7.7E-9	2.4E-9	0	4.8E-8
	ACS4L	AC Lime Silo #4 Loading	2.3E-8	7.9E-10	2.5E-10	0	4.9E-9
	ACS42U	AC Lime Silo #4 Unloading to Lime Slaker	1.1E-7	3.8E-9	1.2E-9	0	2.4E-8
Aggregate Prod.	PCSP1	Portable Crushing and Screening Plant 1 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
	PCSP2	Portable Crushing and Screening Plant 2 (2 crushers (primary and secondary), 2 screens (primary and secondary), and 5 conveyor transfers)	OOO	OOO	OOO	OOO	OOO
Concrete Production	CM	Central Mixer Loading	2.0E-6	0	4.9E-9	0	1.7E-6
	CS1L	Cement/Shotcrete Silo #1 Loading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS1U	Cement/Shotcrete Silo #1 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CS2L	Cement/Shotcrete Silo #2 Loading	2.9E-8	3.3E-9	0	0	2.9E-7

TABLE B-B2. TAPs that Exceed the EL by Source chk **T-RACT Emissions**

	Source ID	Source Description	Arsenic 7440-38-2	Beryllium 7440-41-7	Cadmium 7440-43-9	Formaldehyde 50-00-0	Nickel 7440-02-0
			(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr	(annual) lb/hr
	CS2U	Cement/Shotcrete Silo #2 Unloading	2.9E-8	3.3E-9	0	0	2.9E-7
	CAL	Aggregate Bin Loading	OOO	OOO	OOO	OOO	OOO
	CAU	Aggregate Bin Unloading	OOO	OOO	OOO	OOO	OOO
HVAC	H1M	Mine Air Heater #1 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	H2M	Mine Air Heater #2 (4 MMBtu/hr Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HM	Mill HVAC Heaters (4 x 1.0 MMBtu Propane-Fired)	7.8E-7	4.7E-8	4.3E-6	2.9E-4	8.2E-6
	HAC	Autoclave HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HR	Refinery HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HA	Admin HVAC Heater (0.25 MMBtu Propane-Fired)	4.9E-8	2.9E-9	2.7E-7	1.8E-5	5.1E-7
	HMO	Mine Ops. HVAC Heaters (2 x 0.25 MMBtu Propane-Fired)	9.8E-8	5.9E-9	5.4E-7	3.7E-5	1.0E-6
	HTS	Truck Shop HVAC Heaters (2 x 1.0 MMBtu Propane-Fired)	3.9E-7	2.4E-8	2.2E-6	1.5E-4	4.1E-6
	HW	Warehouse HVAC Heaters (3 x 1.0 MMBtu Propane-Fired)	5.9E-7	3.5E-8	3.2E-6	2.2E-4	6.2E-6
Emer. Power/Fire	EDG1	Camp Emergency Generator (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG2	Plant Emergency Generator #1 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDG3	Plant Emergency Generator #2 (Mfr. Yr. >2007; diesel)	4Z	4Z	4Z	4Z	4Z
	EDFP	Mill Fire Pump (Mfr. Yr. >2009; diesel)	4Z	4Z	4Z	4Z	4Z
Fuel Storage	TG1	Mine Site Gasoline Tank #1	6C	6C	6C	6C	6C
	TG2	Mine Site Gasoline Tank #2	6C	6C	6C	6C	6C
Mining - Modeling Scenario: B2	YPP	Yellow Pine Pit	0	0	0	0	0
	HFP	Hangar Flats Pit	0	0	0	0	0
	WEP	West End Pit	0	0	0	0	0
	BT	Bradley Tailings	9.2E-3	4.4E-5	6.9E-6	0	2.8E-5
	YPPBL	Yellow Pine Pit Blasting	0	0	0	0	0
	HFPBL	Hangar Flats Pit Blasting	0	0	0	0	0
	WEPBL	West End Pit Blasting	0	0	0	0	0
	BTBL	Bradley Tailings Blasting	0.018	8.6E-5	1.3E-5	0	5.4E-5
	STKP	PC Stockpile	0	0	0	0	0
	FDRSF	Fiddle DRSF	0	0	0	0	0
	HFDRSF	Hangar Flats DRSF	4.2E-3	2.0E-5	3.2E-6	0	1.3E-5
	YPDRSF	Yellow Pine DRSF	0	0	0	0	0
	WEDRSF	West End DRSF	0	0	0	0	0
	HR000	Haul Roads	0.030	2.5E-4	4.0E-5	0	1.6E-4
	TSF	Tailing Storage Facility	0	0	0	0	0
	ACCRD	Access Roads	4.0E-6	5.1E-6	7.9E-7	0	3.2E-6
	UGEXP	Scout Portal	2.3E-7	1.1E-9	1.7E-10	0	7.0E-10
		Total	**0.061**	**4.1E-4**	**9.2E-5**	**1.9E-3**	**3.1E-4**

Appendix C – TAP Modeling Results

TABLE C. TAP Maximum Modeled Concentrations and AACs

	TAP Maximum Modeled Concentrations by Model Scenario																	
	Y1	Y2	Y3	H1	H2	H3	H4	W1 [2]	W2 [2]	W3 [2]	W4 [2]	W5 [3]	B1	B2	Max Scenario			Compl-
Pollutant	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	ID	AAC [4]	iance
Aluminum	1.13561	1.41646	1.13855	1.19028	1.28403	1.09010	1.17371	6.01079	5.27252	6.00999	4.97175	6.17075	1.17437	0.97352	6.17075	W5	500	Yes
Arsenic [1]	0.00030	0.00049	0.00029	0.00023	0.00053	0.00020	0.00021	0.00091	0.00095	0.00090	0.00087	N/A	0.00024	0.00012	0.00095	W2	0.0023	Yes
Barium	0.01279	0.01595	0.01282	0.01341	0.01446	0.01228	0.01322	0.06773	0.05941	0.06772	0.05602	0.06953	0.01323	0.01097	0.06953	W5	25	Yes
Beryllium [1]	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	N/A	0.00000	0.00000	0.00001	W1	0.042	Yes
Cadmium [1]	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000002	0.000002	0.000002	0.000002	N/A	0.000000	0.000000	0.000002	W1	0.0056	Yes
Calcium Carbonate	0.34375	0.33431	0.37347	0.39124	0.38168	0.37132	0.38141	1.18652	1.04095	1.18637	0.98165	1.21807	0.39107	0.34851	1.21807	W5	500	Yes
Calcium Oxide	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	0.14837	ALL	100	Yes
Cyanide	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	0.19651	ALL	250	Yes
Formaldehyde [1]	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	N/A	0.00007	0.00007	0.00007	ALL	0.77	Yes
Iron	0.29143	0.36343	0.29219	0.30525	0.32952	0.27957	0.30100	1.54079	1.35154	1.54058	1.27445	1.58179	0.30110	0.24962	1.58179	W5	50	Yes
Manganese	0.00477	0.00595	0.00478	0.00500	0.00538	0.00458	0.00493	0.02531	0.02220	0.02531	0.02094	0.02599	0.00494	0.00410	0.02599	W5	250	Yes
Nickel [1]	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	N/A	0.00000	0.00000	0.00001	W1	0.42	Yes
Phosphorus	0.01036	0.01293	0.01039	0.01088	0.01169	0.00996	0.01073	0.05502	0.04827	0.05502	0.04551	0.05649	0.01074	0.00891	0.05649	W5	5	Yes
Sulfuric Acid	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	0.41149	ALL	50	Yes
Thallium	0.00016	0.00020	0.00016	0.00017	0.00018	0.00016	0.00017	0.00085	0.00074	0.00085	0.00070	0.00087	0.00017	0.00014	0.00087	W5	5	Yes
Vanadium	0.00045	0.00056	0.00045	0.00047	0.00051	0.00043	0.00046	0.00237	0.00208	0.00237	0.00196	0.00243	0.00046	0.00039	0.00243	W5	2.5	Yes

[1] Carcinogenic TAP concentrations adjusted for 70-year exposure, as discussed in Section 3.4.4.
[2] Carcinogenic TAP concentrations adjusted for the West End pit LOM production limit, as discussed in Section 3.4.5.
[3] Modeling Scenario W5 is eliminated for carcinogenic TAP compliance, as discussed in Section 3.4.5.
[4] The AACs for carcinogenic pollutants are increased by a factor of ten per IDAPA 58.01.01.210.12(b); T-RACT adjustment.

Appendix D – Electronic Files

The electronic modeling files, emission inventory file, and Addendum references can be accessed via the following link:

https://drive.google.com/drive/folders/1o0-uNIu5DRds8hLShaD_0nPEBnlEJFCQ?usp=sharing