

TEMPORARY COVERED SOURCE PERMIT APPLICATION REVIEW (New)
Permit Application Number: 0543-01 CSP No. 0543-01-CT
400 TPH MOBILE CRUSHING PLANT W/ 525 BHP DIESEL ENGINE

Applicant: Land Breeze, Inc.

Init. Located: Hickam Air Force Base, Honolulu, Oahu
UTM: Zone 4, 607.521 m E, 2,359,512 m N (NAD-83)

Responsible Ms. Shelaine Liana

Consultant: J.W. Morrow

Official/Title: President

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Equipment Description:

1. 400 TPH Portable Crushing Plant consists of the following:
 - a. IROCK, model RTS-25 Track Plant (including):
 - i) 52" x 17' vibrating grizzly feeder with 5' grizzly section & bypass chute;
 - ii) 400 TPH 4056 horizontal shaft impact crusher;
 - iii) conveyor;
 - iv) watersprays at the grizzly feeder;
 - iv) 525 BHP Caterpillar diesel engine, Model C-15, fired on f.o. no. 2 at 25.7 gal/hr.
 - b. Spyder 516 T screening unit (including):
 - i) 2-deck screen (5' x 16');
 - ii) 2 - conveyors; and
 - iii) watersprays at the transfer point to the 2-deck screen.
 - c. water truck for storage piles and work area.

The Standard Industrial Classification Code (SICC) for this facility is 1429 - Crushed and broken stone, not elsewhere classified.

Air Pollution Controls:

1. Sulfur content of the diesel oil no. 2 shall not exceed 0.5% by weight.
2. Waterspray bars will be used (70% efficiency) at the grizzly feeder on the mobile crusher and on the transfer point to the 2-deck screen.
3. Water truck for storage piles and work area (70% efficiency).

Project:

This is a new temporary covered source permit application for a 400 TPH portable crushing plant with associated Caterpillar 525 BHP diesel engine to be initially operated in Hickam Air Force Base to crush the recycled concrete from demolition of various structures.

The application was dated July 20, 2003 (received on August 26, 2003). Supplemental information was submitted on September 4 & 8, 2003 (by email). The application fee of \$1,000.00 was submitted with the application.

Process:

Raw material (concrete) is dropped into the vibrating grizzly by a loader and passed to the impact crusher. The crushed material drops onto a moving conveyor belt and is transported to the 2-deck Spyder screen where it is size segregated and the oversize material is conveyed back to the crusher. The product material is conveyed to two stockpiles. The crusher is powered by the 525 BHP Cat C-15 diesel engine. The 2-deck Spyder screen is powered by an insignificant 112 BHP Cummins diesel engine.

Applicable Requirements:

Hawaii Administrative Rules (HAR)

Chapter 11-59, Ambient Air Quality Standards

Chapter 11-60.1, Subchapter 1, General Requirements

Chapter 11-60.1, Subchapter 2, General Prohibitions

11-60.1-31, Applicability

11-60.1-32, Visible Emissions

11-60.1-33, Fugitive Dust

11-60.1-38, Sulfur Oxides from Fuel Combustion

Chapter 11-60.1, Subchapter 5, Covered Sources

Chapter 11-60.1, Subchapter 6, Fees for Covered Sources, Noncovered Sources and Agricultural Burning

11-60.1-111, Definitions

11-60.1-112, General Fee Provisions for Covered Sources

11-60.1-113, Application Fees for Covered Sources

11-60.1-114, Annual Fees for Covered Sources

Chapter 11-60.1, Subchapter 8, Standards of Performance for Stationary Sources

11-60.1-161, New Source Performance Standards

Chapter 11-60.1, Subchapter 10, Field Citations

Annual Emissions Reporting:

- a. CERR (type A & B) - Consolidated Emissions Reporting Requirement are not applicable to this facility since the emissions do not trigger type A & B reporting requirements.
- b. Internal: Although CERR is not triggered, annual emissions reporting is required if the total combined facility's emissions of a particular pollutant exceed the in-house (old NEDS) reporting levels. Total facility emissions do not exceed the in-house reporting levels, thus annual emissions reporting for internal purposes is not required.

Compliance Data System (CDS)

CDS is an inventory system for covered sources subject to annual inspections. As a covered source, the facility is a CDS source and is subject to annual emissions reporting.

New Source Performance Standards (NSPS)

40 Code of Federal Regulations (CFR) Part 60 - Standards of Performance for New Stationary Sources

Subpart A - General Provisions

Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants

The stone processing plant is applicable to NSPS Subpart OOO, since the manufacture date of the equipment is after August 1983 (NSPS trigger date of Subpart OOO) and the portable plant has a maximum capacity of greater than 150 TPH.

PSD Applicability

HAR Chapter 11-60.1 Air Pollution Control / Subchapter 7 PSD Review

PSD applies to major stationary sources in an attainment area which emit or have the potential to emit 250 TPY (or 100 TPY for 28 named source categories) of any regulated pollutant, or to such major sources making a major modification involving a significant net emissions increase (e.g., 25 tons per year PM, 15 tons per year PM₁₀ [HAR 11-60.1-1]). PSD does not apply since this facility does not emit more than 250 TPY of any regulated pollutant when operating at the limited 3,500 hours per year.

MACT Requirements (40 CFR Part 63)

MACT is not applicable, because the facility is not a major source of hazardous air pollutants, nor does the facility belong to a source category for which a standard has been promulgated under 40 CFR Part 63.

NESHAP Requirements (40 CFR Part 61 & 63)

The facility is not subject to any standard under 40 CFR Part 61 and 63.

BACT Requirements

BACT analysis applies to new facilities or modifications to existing facilities which exceed significant emission levels. The facility operating at 3,500 hr/yr yields emissions less than the significant level for PM (project PM = 22 tpy < 25 tpy PM significant level), thus BACT is not applicable.

CAM Requirements**40 CFR Part 64**

Applicability of the CAM Rule is determined on a pollutant specific basis for each affected emission unit. Each determination is based upon a series of evaluation criteria. In order for a source to be subject to CAM, each source must:

- Be located at a major stationary source per Title V of the Clean Air Act Amendments of 1990;
- Be subject to federally enforceable applicable requirements;
- Have pre-control device potential emissions that exceed applicable major source thresholds;
- Be fitted with an "active" air pollution control device; and
- Not be subject to certain regulations that specifically exempt it from CAM.

Emission units are any part or activity of a stationary source that emits or has the potential to emit any air pollutant. This source does not exceed 100 tpy of PM and is not a major source, thus CAM is not applicable.

Insignificant Activities:

A 112 BHP Cummins Diesel Engine, Model 4BTA3.9-C, firing diesel oil no. 2 at 0.366 lb/BHP-hr (0.366 lb/BHP-hr x 112 BHP / 7.1 lb/gal = 5.8 gal/hr) is exempt per Hawaii Administrative Rules (HAR) §11-60.1-62(d)(4) "Other than smoke house generators, fuel burning equipment with a heat input capacity less than one million BTU per hour, except where individually exempted equipment exceeds five million BTU per hour when operated within the facility and controlled by a single owner or operator."

$$140,000 \text{ Btu/gal} \times 5.8 \text{ gal/hr} \times 1 \text{ MMBtu} / 1,000,000 \text{ Btu} = \underline{0.812 \text{ MMBtu/hr}} < 1 \text{ MMBtu/hr}$$

Alternative Operating Scenarios:

Applicant proposed to include an alternate operating scenario to allow the temporary replacement of the diesel engine with one of equal or lesser rating in order to continue production in case the engine becomes temporarily disabled.

Project Emissions:

The project emissions that will be emitted by the mobile plant will include mostly nitrogen oxides (NOx) with lesser amounts of other criteria pollutants and hazardous air pollutants from the Caterpillar diesel engine (point source) and particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM10) from crushing and screening (fugitive sources).

Emissions Factors

- 525 BHP diesel engine emissions of NOx, CO, & PM were taken from manufacture's specs (525 BHP, 25.7 gal/hr @ 2100 rpm and 100% load), tier II not to exceed values.

$$\text{NOx (ef)} = 7.20 \text{ lb/hr}$$

$$\text{CO (ef)} = 0.71 \text{ lb/hr}$$

$$\text{PM (ef)} = 0.08 \text{ lb/hr}$$

Other pollutant emission factors were taken from AP-42, Section 3.3, 10/96, Gasoline and Diesel Industrial Engines, less sulfur dioxide which was based on mass balance equation. For conservatism, assumed all PM = PM10.

- Stone Crushing emission factors for PM and PM10 were taken from AP-42, Section 11.19.2 Crushed Stone Processing, 1/95. The demolition material will be processed, stored, and used onsite. There will be no trucking of the material offsite and the site is already developed so no vehicle traffic on unpaved roads will be included in this assessment.

Table 1, 2, 3, & 4 show the emissions from the diesel engine, exempt diesel engine, and portable crushing (PM/PM-10), respectively, while Table 5 shows the total project emissions from the portable crushing plant (less the exempt diesel engine since the emissions would not exceed major source levels if included).

TABLE 1
525 BHP CATERPILLAR DIESEL ENGINE CRITERIA & HAPS EMISSIONS

Pollutant	Emis. Factor (lb/hp-hr)	Input (hp)	Emis. (lb/hr)	Emis. 3,500 hr/yr (tpy)	Emis. 8,760 hr/yr (tpy)	Emis. (g/s)
NOx	manuf.	525	7.200	12.600	31.536	0.907
CO	manuf.	525	0.710	1.243	3.110	0.089
SO2	mass bal.	525	1.823	3.190	7.985	0.230
PM	manuf.	525	0.080	0.140	0.350	0.010
PM10	manuf.	525	0.080	0.140	0.350	0.010
TOC	0.0025	525	1.313	2.297	5.749	0.165
HAPs	lb/MMBtu	MMBtu/hr	lb/hr	3,500 hr/yr tpy	8,760 hr/yr tpy	
Benzene	0.000933	3.598	3.36e-03	5.87e-03	1.47e-02	
Toluene	0.000409	3.598	1.47e-03	2.58e-03	6.45e-03	
Xylenes	0.000285	3.598	1.03e-03	1.79e-03	4.49e-03	
Propylene	0.00258	3.598	9.28e-03	1.62e-02	4.07e-02	
1,3-Butadiene	0.0000391	3.598	1.41e-04	2.46e-04	6.16e-04	
Formaldehyde	0.00118	3.598	4.25e-03	7.43e-03	1.86e-02	
Acetaldehyde	0.000767	3.598	2.76e-03	4.83e-03	1.21e-02	
Acrolein	0.0000925	3.598	3.33e-04	5.82e-04	1.46e-03	
Total PAH	0.000168	3.598	6.04e-04	1.06e-03	2.65e-03	
			Total HAPs =	4.06e-02	1.02e-01	

Note: Criteria pollutant emission factors (ef) from AP-42, Table 3.3-1 (10/96) less SO2 ef from mass balance (see below for calcs.). Assumed all PM = PM-10. HAPS from AP-42, Table 3.3-2 (10/96). Hours of operation based on limited and maximum operations of 3,500 and 8,760 hours per year. MMBtu/hr based on fuel consumption rate of 25.7 gal/hr and a heating value of 140,000 Btu/gal thus, 140,000 Btu/gal x 25.7 gal/hr x 1 MMBtu / 1,000,000 Btu = 3.598 MMBtu/hr.

SO2 mass balance equation (for 525 BHP Caterpillar diesel engine)

fuel feed rate x specific wt. of fuel x 0.5% sulfur = amount of sulfur in fuel (lbs/hr)

$$25.7 \text{ gal/hr} \times 7.1 \text{ lb/gal} \times 0.005 = 0.9124 \text{ lb/hr S}$$

$$S + O_2 \rightarrow SO_2 \quad \text{MW: } S=32.06; O=16; SO_2=32.06+16(2) = 64.06$$

$$\frac{S}{SO_2} = \frac{32.06}{64.06} = \frac{0.9124}{X} \quad (\text{w/ fuel rate @ } 25.7 \text{ gal/hr, yields } 0.9124 \text{ lb S})$$

thus SO2 or X = 1.823 lb SO2/hr

**TABLE 2
EXEMPT 112 BHP DIESEL ENGINE CRITERIA & HAPS EMISSIONS**

Pollutant	Emis. Factor (lb/hp-hr)	Input (hp)	Emis. (lb/hr)	Emis. 3,500 hr/yr (tpy)	Emis. 8,760 hr/yr (tpy)
NOx	0.031	112	3.472	6.076	15.207
CO	0.00668	112	0.748	1.309	3.277
SO2	mass balance	112	0.411	0.720	1.802
PM	0.00220	112	0.246	0.431	1.079
PM10	0.00220	112	0.246	0.431	1.079
TOC	0.00247	112	0.277	0.484	1.212
HAPs	lb/MMBtu	MMBtu/hr	lb/hr	3,500 hr/yr tpy	8,760 hr/yr tpy
Benzene	0.000933	0.812	7.58e-04	1.33e-03	3.32e-03
Toluene	0.000409	0.812	3.32e-04	5.81e-04	1.45e-03
Xylenes	0.000285	0.812	2.31e-04	4.05e-04	1.01e-03
Propylene	0.00258	0.812	2.10e-03	3.67e-03	9.18e-03
1,3-Butadiene	0.0000391	0.812	3.17e-05	5.56e-05	1.39e-04
Formaldehyde	0.00118	0.812	9.58e-04	1.68e-03	4.20e-03
Acetaldehyde	0.000767	0.812	6.23e-04	1.09e-03	2.73e-03
Acrolein	0.0000925	0.812	7.51e-05	1.31e-04	3.29e-04
Total PAH	0.000168	0.812	1.36e-04	2.39e-04	5.98e-04
			Total HAPs	9.17e-03	2.30e-02

Note: Criteria pollutant emission factors (ef) from AP-42, Table 3.3-1 (10/96) less SO2 which is from the mass balance equation (see calcs. below). Assumed all PM = PM-10. HAPS from AP-42, Table 3.3-2 (10/96). Hours of operation based on projected and maximum operations of 3,500 and 8,760 hours per year. MMBtu/hr based on fuel consumption rate of 5.8 gal/hr and a heating value of 140,000 Btu/gal thus, 140,000 Btu/gal x 5.8 gal/hr x 1 MMBtu/1,000,000 Btu = 0.812 MMBtu/hr.

SO₂ mass balance equation (for EXEMPT 112 BHP Cummins diesel engine)
 fuel feed rate x specific wt. of fuel x 0.5% sulfur = amount of sulfur in fuel (lbs/hr)
 5.8 gal/hr x 7.1 lb/gal x 0.005 = 0.2059 lb/hr S

S + O₂ → SO₂ MW: S=32.06; O=16; SO₂=32.06+16(2) = 64.06

$\frac{S}{SO_2} = \frac{32.06}{64.06} = \frac{0.2059}{X}$ (w/ fuel rate @ 5.8 gal/hr, yields 0.2059 lb S)

thus SO₂ or X = 0.4114 lb SO₂/hr

TABLE 3
400 TPH STONE PROCESSING PM EMISSIONS

activity	Proc. Rate (tph)	EF PM (lb/ton)	Control Efficiency (%)	PM Emis. 3,500 hr/yr (tpy)	PM Emis. 8,760 hr/yr (tpy)
primary crushing	400	0.005	70	1.050	2.628
conveyor trans. pt. (10)	400	0.0029	35	13.195	33.025
truck unloading	400	3.36e-05	0	0.024	0.059
truck loading	400	0.0002	0	0.140	0.350
screening	400	0.0315	70	6.615	16.556
active storage piles	400	0.005	70	1.050	2.628
				22.074	55.247

Note: Used maximum capacity of the crusher (400 tph). Emission factors for stone processing from AP-42, Table 11.19.2-2 (1/95) crushed stone processing; active storage piles from Section 13.2.4 (1/95) aggregate handling and storage piles. Emissions from vehicle traffic on unpaved roads are not included since the portable crushing plant will be used on a developed site without any truck hauling offsite.

TABLE 4
400 TPH STONE PROCESSING PM-10 EMISSIONS

activity	Proc. Rate (tph)	EF PM-10 (lb/ton)	Control Efficiency (%)	PM-10 Emis. 3,500 hr/yr (tpy)	PM-10 Emis. 8,760 hr/yr (tpy)
primary crushing	400	0.0024	70	0.504	1.261
conveyor trans. pt. (10)	400	0.0014	35	6.370	15.943
truck unloading	400	1.60e-05	0	0.011	0.028
truck loading	400	0.00010	0	0.070	0.175
screening	400	0.015	70	3.150	7.884
active storage piles	400	0.0024	70	0.504	1.261
				10.609	26.553

Note: Used maximum capacity of the crusher (400 tph). Emission factors for stone processing from AP-42, Table 11.19.2-2 (1/95) crushed stone processing; active storage piles from Section 13.2.4 (1/95) aggregate handling and storage piles. Emissions from vehicle traffic on unpaved roads are not included since the portable crushing plant will be used on a developed site without any truck hauling offsite.

TABLE 5
SUMMARY OF EMISSIONS

Pollutant	525 BHP DE (tpy)		Port. Crush'g Plant (tpy)		Total Facility Emis (tpy)		Signif. Levels (tpy)	CERR Levels (tpy)	In-house Levels (tpy)
	3,500 hr/yr	8,760 hr/yr	3,500 hr/yr	8,760 hr/yr	3,500 hr/yr	8,760 hr/yr			
NOx	12.60	31.54			12.60	31.54	40	100	25
SO2	3.19	7.98			3.19	7.98	40	100	25
CO	1.24	3.11			1.24	3.11	100	1000	250
PM	0.14	0.35	22.07	55.25	22.21	55.60	25	NA	25
PM10	0.14	0.35	10.61	26.55	10.75	26.90	15	100	25
VOC	2.30	5.75			2.30	5.75	40	100	25
HAPs	0.04	0.10			0.04	0.10	NA	NA	NA

Synthetic Minor Source:

Synthetic Minor Applicability: A synthetic minor source is a facility that is potentially major (as defined in HAR 11-60.1-1), but is made non-major through federally enforceable permit conditions. This facility is not a synthetic minor since unlimited air emissions do not exceed major source threshold levels.

Air Quality Assessment:

The applicant modeled the diesel engine using BEE-Line's BEEST for Windows ISCST3 model to determine source compliance with Federal and State ambient air quality standards (AAQS) since the nearby temporary structure impacted the resulting ambient concentrations. Applicant also modeled in SCREEN3 without temporary structures for future location changes. Results from both analyses are presented below.

ISCST3 Model

Assumptions used in the ISCST3 modeling analysis include regulatory default and rural dispersion parameters. Stack parameters are shown in Table 6 and results in Table 7.

Meteorological data - The meteorological data base consisted of processed hourly surface data collected at Honolulu International Airport, Honolulu (1995) and twice daily upper air data recorded at the National Weather Service Station at Lihue, Kauai (1995).

Terrain - The applicant utilized flat terrain due to the proposed initial location at Hickam Air Force Base.

Receptor location - Receptors were located in areas considered ambient air. The initial location includes a physical barrier restricting public access, so ambient air was assumed to be outside of the fence line, although the fence line is nearby the diesel engine stack. The applicant provided dispersion modeling utilizing a discrete rectangular receptor grid (1,000 m x 1,000 m, 1,138 receptors) around the DE with a receptor spacing of 30 meters.

Potential downwash - The EPA building profile input program (BPIP) was used to derive the direction specific building dimensions for importing into the ISCST3 model. The program was used to determine the GEP stack height, analyze potential structure-induced downwash effects for the project's stack and calculate the building downwash parameters for ISCST3.

Background data - Since this is a new source, background data was included in the modeling analysis as follows:

	1 hr	3 hr	8 hr	24 hr	ann.	source
NO2					6	2001 West Beach
SO2		45		25	2	2001 Honolulu
PM10				63	16	2001 Honolulu
CO	5,244		2,209			2001 Honolulu

Honolulu monitoring station background data was used where available. Since NO2 is not available at the Honolulu monitoring station, West Beach background data was used in lieu of Kapolei since the population and industrial activities more closely represent that of Hickam Air Force Base.

TABLE 6
SOURCE EMISSION RATES AND STACK PARAMETERS FOR AIR MODELING

EMISSION RATES					STACK PARAMETERS			
SO ₂ (g/s)	NO _x (g/s)	CO (g/s)	PM ₁₀ (g/s)	Pb (g/s)	Height (m)	Temp. (K)	Velocity (m/s)	Diameter (m)
0.230	0.907	0.089	0.010	N/A	4.267	752	117.764	0.127

TABLE 7
PREDICTED AMBIENT AIR QUALITY IMPACTS

Air Pollut.	Ave. Time	Impact ug/m ³	Background ug/m ³	Total Impact ug/m ³	Air Standard ug/m ³	% Standard
SO ₂	3-hour	140.97	45	185.97	1,300	14.31%
	24-hour	42.24	25	67.24	365	18.42%
	Annual	5.55	2	7.55	80	9.44%
NO ₂	Annual	22.22	6	28.22	70	40.31%
CO	1-hour	112.66	5244	5356.66	10,000	53.57%
	8-hour	38.04	2209	2247.04	5,000	44.94%
PM10	24-hour	1.88	63	64.88	150	43.25%
	Annual	0.25	16	16.25	50	32.50%

Credit not taken for annual concentrations due to the limited operating hours of 3,500.
NO2 based on ambient ratio method (ARM) tier I which assumes 100% NOx = NO2.

The combined project air emissions plus the ambient background concentrations are within State and Federal AAQS.

SCREEN3 model (for future location changes in flat terrain w/ no buildings)

Pursuant to Hawaii Administrative Rules, an ambient air quality impact analysis using the EPA-approved SCREEN3 model was performed on the 525 BHP Caterpillar diesel engine by the applicant and verified by DOH. The assumptions used on the modeling analysis are as follows:

- State of Hawaii scaling factor of 0.2 for annual averaging period.
- EPA scaling factors of 0.9, 0.7, and 0.4 for the 3-hr, 8-hr, & 24-hr concent., respectively.
- Urban dispersion parameters (urban resulted in more conservative concentrations than rural, so urban was accepted).
- Default meteorology.
- Ambient ratio method (ARM) tier II (75% NO_x = NO₂).
- Limited annual operation of 3,500 hour/year.

EMISSION SOURCES AND RATES

The point source emission rates and stack parameters used in conjunction with the modeling analysis were presented in the previous Table 6.

Potential Downwash Effect:

Potential downwash-inducing structures associated with the facility (when located at a site without any other structures except the mobile crushing plant) include the grizzly feeder, crusher housing, and screen housing, with the screen yielded the greatest impact due to downwash effects.

Receptor Locations:

Receptors are to be located in areas considered ambient air. Ambient air is considered to be located immediately adjacent to the stack. Flat terrain was used in the model (any terrain features at subsequent sites would need to be addressed). Automated receptors were placed at a distance from 1 m to 5,000 m.

Background Data:

Same as addressed in previous ISCST3 modeling analysis.

NO₂:

Results of the nitrogen dioxide emissions were obtained using the Ambient Ratio Method, Tier II, which conservatively assumes that 75% of the NO_x is converted to NO₂.

Modeling Results:

The unitary 1-hour concentration was determined by the model to be 1,117 ug/m³ per gram per second and was located meters from the facility. The maximum predicted ambient air concentrations are shown in Table 8.

**TABLE 8
AMBIENT AIR CONCENTRATIONS**

Model Conc. = 1117 $\mu\text{g}/\text{m}^3$ per gram/sec								
Pollutant	Avg. Period	Emission Rate (g/s)	Time Factor	CONCENTRATION ($\mu\text{g}/\text{m}^3$)				% of std.
				Concentration	Background	Total	Standard ¹	
CO	1-HR	0.09	1.0	100.5	5244	5344.5	10,000	53.4
	8-HR	0.09	0.7	70.4	2209	2279.4	5,000	45.6
NO ₂ ²	Annual	0.91	0.2	60.9	6	66.9	70	95.6
SO ₂	3-HR	0.23	0.9	231.2	45	276.2	1,300	21.2
	24-HR	0.23	0.4	102.8	25	127.8	365	35.0
	Annual	0.23	0.2	20.5	2	22.5	80	28.2
PM ₁₀	24-HR	0.01	0.4	4.5	63	67.5	150	45.0
	Annual	0.01	0.2	0.9	16	16.9	50	33.8
Pb	Quarter	N/A	0.4	0.00	0.1	0.10	1.5	6.7

¹ Most stringent State or Federal standard.

² NO₂ by ARM, Tier II.

Model conc. x Potential emissions x Time factor = Potential Ambient Air Impact
Annual concentrations takes into account the annual limit of 3,500 hr/yr (x 3,500/8,760).

Based on the information provided in the application, the emissions impact from the incinerator will comply with State and Federal ambient air quality standards.

Significant Permit Conditions:

Condition:

The mobile crusher (including the crusher and conveyor transfer points) is subject to conditions of NSPS, 40 CFR Part 60 Subpart OOO.

Purpose:

Crusher was manufactured > August 1983 and has a maximum capacity > 150 tph (400 tph).

Condition:

The portable crushing plant will be limited to 3,500 hours of operation per rolling twelve-month period.

Purpose:

Applicant proposed, to meet AAQS for NO₂.

Conclusion and Recommendations:

The greatest emissions from the facility will be PM and NOx emissions generated by the portable crushing plant and diesel engine. Conservatism used in assessing pollutant emissions from the portable crushing plant included using maximum crusher capacity (400 tph) where actual crusher throughput will be significantly less (probably more in the range of 100-200 tph).

Based on the information supplied by Land Breeze, Inc. it is the preliminary determination of the Hawaii Department of Health (DOH) that the proposed project will not cause or contribute to a violation of any State or National ambient air quality standard. Issuance of a new temporary covered source permit is recommended based on the review of the information provided by the applicant and subject to significant permit conditions, public comments, and EPA review.

Scott Takamoto
9/18/03