PROPOSED
File No. 0507-04
Minor Modification of CSP No. 0507-01-CT

Permit Application Review for an Amendment to Temporary Covered Source Permit (CSP) No. 0507-01-CT

Application No.: 0507-04 for a Minor Modification

Applicant: Pineridge Farms, Inc.

Facility Title: One (1) 275 TPH Crushing Plant with One (1) 300 HP Diesel Engine; One (1) 195 TPH Crushing Plant with One (1) 160 HP Diesel Engine; One (1) 400 TPH Crushing and Screening Plant with One (1) 300 HP Diesel Engine; One (1) 200 TPH Screening Plant; Two (2) 500 TPH Screening Plants; and One (1) 600 TPH Screening Plant

SIC Code: 1411

Location: Various Temporary Sites, State of Hawaii

Proposed initial Location for the new 500 TPH Powerscreen Turbo Chieftain 1400 Crushing and Screening Plant: Pineridge Farms' storage yard at Middle Street, Oahu, for inspection, preparation and testing. The initial operating site for this equipment has not yet been determined.

Currently approved locations for existing equipment are:

1) 275 TPH 428 Trakpactor Impact Crusher with Caterpillar 3306, 300 BHP Diesel Engine: Hickam Air Force Base, Oahu
2) 195 TPH Metro Trak Jaw Crusher with Caterpillar 3116TA, 160 BHP Diesel Engine: Ewa by Gentry Area 34, Hawaii Kai, Honolulu, Oahu
3) 200 TPH Mark (Mk) II Powerscreen, Serial No. 2813808: Meadow Gold Farms, off of Waikupanaha Street, in storage at Ewa (broken), Oahu
4) 600 TPH Mark (Mk) III Powergrid Powerscreen: Ewa by Gentry Area 34, Honouliuli, Ewa, Oahu
5) 500 TPH Chieftain 1400 Powerscreen: Waimanalo Gulch, Oahu
6) 400 TPH BL-Pegson 4242 SR Impactor: in storage at Middle Street yard, Honolulu, Oahu

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Equipment Description:
The applicant is proposing to add the equipment listed in Table 1a. Existing equipment are listed in Table 1b below:

Table 1a - Proposed Equipment

Permit No./ Date	Type	Manufacturer	Model/ SN	Year	Description	Power Source
0507-04	500 TPH[a b] Vibrating Screen	Powerscreen	Turbo Chieftain 1400, SN 6612673	2004	2 deck, 11' x 5' On tracks	exempt Deutz BF4M 1012C Diesel Engine

Table 1b - Existing Equipment

Permit No./ Date	Type	Manufacturer	Model/ SN	Year	Description	Power Source / Fuel
0507-01-CT 4/25/02	275 TPH [a] Crusher	BL-PEGSON	428 Trakpactor SN QM014776	2000	Crushes basalt rock, coral, or concrete	Diesel Engine listed below
	300 HP [a] Diesel Eng.	Caterpillar	3306; SN 64Z33001	2001	Drives Trakpactor and conveyors	Diesel # 2 max 15.4 gph[a]
	195 TPH [a] Crusher	BL-PEGSON	Metro Trak, SN QM10381	2000	Crushing of basalt, rock, coral, concrete	Diesel Engine listed below
	160 HP[a] Diesel Eng.	Caterpillar	3116TA; SN 2MR01700	2000	Drives Metro Trak and conveyors	Diesel # 2 max 7.9 gph[a]
	200 TPH[a] Vibrating Screen	Powerscreen	Mark (Mk) II, SN 2813808	1990	2 deck, 4' x 6'	exempt Lister-Petter TS3A008 Diesel Engine
	600 TPH[a] Vibrating Screen	Powerscreen	Powergrid, Mark (Mk) III, SN 7212816	1997	2 deck, 10' x 7'	exempt Duetz F3L912 Diesel Eng.
	Misc. Conveyors	--	--	--	transports material from crushers, screens, stockpiles	exempt TS2A002 Lister-Petter & Diesel Engines listed
	Water spray system	--	--	--	nozzles located at material transfer points (see below)	N/A
0507-02 8/26/03	500 TPH[a b] Vibrating Screen	Powerscreen	Turbo Chieftain 1400, SN 6608038	2002	2 deck, 11' x 5' On tracks	exempt Deutz BF4M 1012C Diesel Engine

[a] Based on manufacturers' specifications.

Table 1b - Existing Equipment (cont'd)

Permit No./ Date	Type	Manufacturer	Model/ SN	Year	Description	Power Source / Fuel
0507-03 2/3/04	400 TPH[a] Crushing and Screening Plant	BL-PEGSON	4242 SR Tracked Impactor with product sizing screen SN QMO17963	2003	Crushing of basalt, rock, coral, or concrete Screen: vibrating, 2 deck, 11' x 5'	Diesel Engine listed below
	300 HP[a] Diesel Eng.	Caterpillar	C-9 DITA SN CLJ03612	2003	Drives 4242 SR crusher, screen, and conveyors	Diesel #2 max 15.0 gph[a]

[a] Based on manufacturers' specifications.
[b] Another Turbo Chieftain 1400 vibrating screen (Serial No. 6603808), previously permitted on April 4, 2002, was sold and thus, was earlier removed from the permit.

Proposed Project:
Pineridge Farms, Inc. proposes to add another Powerscreen Turbo Chieftain 1400, Serial No. 6612673, as listed in Table 1a, above, to their Temporary Covered Source Permit (CSP) No. 0507-01-CT. It comes equipped with a Deutz BF4M 1012C 109 HP Diesel Engine, which is exempt from air permit requirements. The specifications of this machine and its diesel engine are identical to the currently permitted Powerscreen Turbo Chieftain 1400. Both of these screens are on tracks.

Pineridge Farms, Inc. submitted this change as a minor modification as they are proposing to replace the identical Powerscreen Turbo Chieftain 1400, Serial No. 6603808, which was previously sold. They propose not to process fines with the proposed unit and to maintain all of the other existing permit limits, including location change and facility limiting configurations as established in the original permit evaluation. This existing permit condition in Attachment II, paragraph C.2 limits the facility configurations to the following:

(1) Mk III Powergrid and One (1) Mk II Powerscreen;
(2) Mk III Powergrid and One (1) crushing plant (Trakpactor or Metro Trak); or
(3) Two (2) crushing plants (Trakpactor and Metro Trak), One (1) Mark II Powerscreen, and One (1) Turbo Chieftain 1400 Powerscreen,
(4) 4242 SR Tracked Impactor with Product Sizing Screen

The equipment may operate individually and simultaneously at different locations, or be combined and operate simultaneously at the same location in the above configurations.

In August 2004, the Emission Factors for crushed stone processing operations were revised by U.S. EPA in Chapter 11, Part 19.2 of Compilation of Air Pollutant Emission Factors, AP-42, for Stationary Point and Area Sources. To ensure that the combined emissions from simultaneous operation of various equipment at the same location would not exceed the level for major source (PM > 100 TPY), the applicant agreed on August 11, 2004 via fax message (Encl (1)) to lower the maximum annual operating hours for some of the above four (4) site configurations. The new operating limits are described and tabulated in the "Project Emissions" section of this document. As such, the total emissions from the equipment covered by this permit will not exceed limits for a "major source" levels in the equipment configurations that are allowable by this permit.

The applicant will continue to be allowed to operate in configurations where less equipment than that specified above is used at a site (i.e., operation of each equipment individually at different sites). The Mk III Powergrid Powerscreen is currently not allowed to operate at the same location as either of the two Turbo Chieftain 1400 Powerscreens, nor in the same location as the 4242 Tracked Impactor with Sizing Screen.

Pineridge Farms is proposing to screen various materials with the mobile Turbo Chieftain 1400 screening plant at various locations in the State of Hawaii. The applicant indicated that the initial location for the proposed unit will be their storage yard to clean, test and prepare the equipment for rental. The initial operating site for this equipment has not yet been determined. The applicant is also proposing to apply the restriction of no processing of fines to the new unit.

The length of operation at each project site is unchanged from the previous submittal with typical operating hours of 8 hr/day, 5 days/week. Operations will be irregular depending on job availability and contractors' requirements. Typically, there are times when the plants will sit idle.

The remaining equipment located at the facility will remain unchanged (except for some reduction in annual operating hour limits) and there are no other changes proposed for this facility. The application fee for minor modification to a temporary covered source permit of $100.00 was processed.

Air Pollution Controls:
The facility will control particulate emissions from the proposed unit by employing water spray bars at the following material transfer points:

1. At hopper exit; and
2. At feed of screen.

No other changes to air pollution controls are proposed.

Applicable Requirements:
Hawaii Administrative Rules (HAR)
- Title 11 Chapter 59, Ambient Air Quality Standards
- Title 11 Chapter 60.1, Air Pollution Control
  - Subchapter 1 - General Requirements
  - 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
  - Subchapter 5 - Covered Sources
  - 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
  - Subchapter 8 - Standards of Performance for Stationary Sources
    - 11-60.1-161(25) Standards of Performance for Non-metallic

New Source Performance Standards:
40 CFR Part 60 - Standards of Performance for New Stationary Sources

Subpart A - General Provisions
Subpart OOO - Standards of Performance for Non-metallic Mineral Processing Plants

40 CFR Part 60 Subpart OOO applies to portable crushed stone plants with capacities greater than 150 TPH that commence construction, reconstruction, or modification after August 31, 1983. The crushing plants and their conveyors meet these conditions and were determined subject to Subpart OOO in the last permit evaluation. The proposed unit also meets these conditions and is subject to Subpart OOO.

As with the existing screening units, the proposed screen will initially be operating independently of the crushing plants. Although stand-alone screens are exempt from Subpart OOO, there may be times, depending on future jobs, when one of more of the screens will be operated in conjunction with a crusher (i.e., all of the material crushed is then screened). As with the other screening units, should the proposed screening plant be utilized in conjunction with a crusher, that screen and its conveyors, shall be subject to Subpart OOO.

Just as was required for the other screening units, monthly visible emissions observations shall be required for the newly proposed screening plant if it is used in conjunction with a crushing plant at any time during that month. Initial source performance testing shall be required for the screening plant if it is utilized in conjunction with a crusher and annual source performance testing shall be required for the screening plant if it is utilized in conjunction with a crusher at any time during that year. Monitoring, recordkeeping, notification, and reporting requirements are already included in the permit to require tracking of each time a screening plant is used in conjunction with a crushing plant, and to ensure monthly V.E. observations, as well as initial and annual source performance testing of the screens are properly addressed.

This source is not subject to **PSD** requirements because it is not a major stationary source, as defined in HAR Title 11, Chapter 60.1, Subchapter 7 and 40 CFR Part 52, Section 52.21.

This source is not subject to **NESHAPS** as there are no standards in 40 CFR Part 61 applicable to this facility (crushing and screening plant operations).

This source is not subject to **MACT** as the facility is not a major or area source of HAPS, covered under 40 CFR Part 63.

A Best Available Control Technology (**BACT**) analysis is required for new covered sources and significant modifications to covered sources that have the potential to emit or increase emissions above significant amounts, as defined in HAR, Section 11.60.1-1, considering any limitations, enforceable by the director, on the covered source to emit a pollutant. This facility is an existing source. The change proposed is the addition of a screening unit. The addition of a second Turbo Chieftain 1400 Powerscreen to the facility with the associated proposed limitations (i.e., restriction from processing fines, not allowing any of the other equipment to be operated at the same site as the proposed unit) and maintaining the other limiting configurations and the location change requirements identified in the existing permit do not increase potential emissions at any location and is considered a minor modification. Therefore, a BACT analysis was not performed at this time.

Compliance Assurance Monitoring (CAM) Applicability:
40 CFR Part 64- The purpose of Compliance Assurance Monitoring (CAM) is to provide reasonable assurance that compliance is being achieved with large emission units that rely on air pollution control device equipment to meet an emissions limit or standard. For CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential precontrol emissions that are greater than the major source level; and (5) not otherwise be exempt from CAM. The facility remains exempt from Compliance Assurance Monitoring (CAM) provisions because this source is not a major source.

Consolidated Emissions Reporting Rule (CERR) and Compliance Data System (CDS) Applicability:
40 CFR Part 51, Subpart A - Emission Inventory Reporting Requirements, determines CER based on facility wide emissions of each air pollutant at the CER triggering levels shown below.

Pollutant	CER (Type B) Triggering Levels (tpy)	In-house Total Facility Triggering Levels (tpy)
NO_x	≥100	≥25
SO_x	≥100	≥25
CO	≥1000	≥250
PM_{10}	≥100	≥25 (PM also)
VOC	≥100	≥25
Pb	≥ 5	≥25

This facility does not have any emissions at the CER triggering levels. Therefore, CER requirements are not applicable.

Although CER for the facility is not triggered, the Clean Air Branch requests annual emissions reporting from those facilities that have facility-wide emissions of a single air pollutant exceeding in-house triggering levels. Annual emissions from these facilities are used within the Department and are not inputted into the AIRS database. Total combined facility emissions exceed the in-house triggering level for PM (96.7 TPY including fugitive in equipment configuration c) and PM10 (30.0 TPY including fugitive in configuration c); therefore, annual emissions reporting is required for in-house recordkeeping purposes.

Applicability of CDS reporting looks at emissions on a facility-wide basis and whether or not the facility is a covered source. Compliance Data System (CDS) is an inventory system used to track covered sources subject to annual inspections and requirements are applicable to all covered sources. As a covered source, the facility remains a CDS source and is subject to annual emissions reporting.

Insignificant Activities/Exemptions:
The applicant is proposing to add another Duetz diesel engine (Model BF4M 1012C) as the power source for the second Turbo Chieftain 1400 Screener. This engine is exempt from air permit requirements per HAR 11-60.1-82(f)(2) which exempts fuel burning equipment with a heat input capacity less than 1 MMBtu/hr, except where the total heat input capacity of all individually exempted equipment exceeds 5 MMBtu/hr when operated within the facility and controlled by a single owner or operator. The maximum HP for this unit is 109 HP. Converting HP to MMBtu/hr (using average BSFC of 7,000 Btu/HP-hr from AP-42, Note a of Table 3.3-1):

100 HP X 7,000 Btu/HP-hr = 7.63 X 10E5 Btu/hr = 0.763 MMBtu/hr < 1 MMBtu/hr

Existing insignificant activities at the facility consist of the following:

1. Engines exempt from the air permit requirements per requirements per 11-60.1-82(f)(2):

    a. The Duetz diesel engine (Model F3L912) powering the Mark III Powergrid Powerscreen. 58 HP maximum, 0.462 MMBtu/Hr < 1 MMBtu/HR
    b. A Duetz diesel engine (Model BF4M 1012C, Serial No. 00756448) powering the other Turbo Chieftain 1400 Powerscreen. 109 HP maximum, 0.763 MMBtu/Hr < 1 MMBtu/HR
    c. The Lister-Peter diesel engine (Model TS3A008) powering the Mark II Powerscreen. 2.44 gal/hour maximum fuel feed rate, 0.334 MMBtu/Hr < 1 MMBtu/HR
    d. The Lister-Peter diesel engine (Model TS2A002) powering an auxiliary conveyor used with the Powerscreen to remove undersize material. 1.66 gal/hour maximum fuel feed rate, 0.227 MMBtu/Hr < 1 MMBtu/HR

    Sum of the rated heat input from engines listed above, including the proposed Duetz engine:

    0.462 MMBtu/Hr + 0.763 MMBtu/Hr + 0.334 MMBtu/Hr + 0.227 MMBtu/Hr = 1.79 MMBtu/Hr, which is < 5 MMBtu/Hr

    The second Duetz diesel engine (Model BF4M 1012C, Serial No. 00609879) which powered the removed Turbo Chieftain 1400 screen was removed.

2. Diesel No. 2 fuel is stored on site in a 300 gallon tank. This tank was previously determined exempt from the air permit requirements per HAR, Section 11-60.1-82(f)(1) because it has a capacity of less than 40,000 gallons and is not subject to any standard or other requirement pursuant to Section 111 or 112 of the CAA. This tank is not subject to NESHAPS as there are no standards in 40 CFR Part 61 applicable to this source. It is also not subject to NSPS as there are no applicable regulations in 40 CFR Part 60 pertaining to this fuel tank.

Alternate Operating Scenarios:
No other alternate operating scenarios are proposed as part of this minor modification.

Project Emissions:
The maximum potential emissions at any site, as calculated in the original permit application evaluation, were recalculated because in August 2004, the Emission Factors for crushed stone processing operations were revised by US EPA in Chapter 11, Part 19.2 of Compilation of Air Pollutant Emission Factors, AP-42, for Stationary Point and Area Sources. The revised calculations showed an increase in emissions for some equipment configurations. To ensure that the combined emissions from simultaneous operation of various equipment at the same location would not exceed the level for major source (PM > 100 TPY), the maximum annual operating hours for some of the site configurations had to be lowered. The tables below show the new emissions for rock crushing and screening operations, and the lower maximum annual operating hours required for some configurations. By fax message on August 11, 2004, the applicant agreed to maintain the 4 configurations and combinations of equipment at any one site as stipulated in Special condition no.
II-C.2 of the permit, and also agreed with the lower annual operating hours.

The emissions previously calculated in File Nos. 0507-01-CT, 0507-02, and 0507-03 for aggregate handling and storage piles, wind erosion, unpaved roads, and diesel engines are still valid and were only revised to reflect lower annual operating limits. The most current AP-42 emission factors were used in the calculations (Tables 3.3-1 and 3.3-2, 10/96; 11.19.2-2, 8/04; and Sections 13.2.2, 9/98; and 13.2.4, 1/95). Engine emission calculations were based on a heating value for diesel No. 2 of 137,000 Btu/gal.

Calculations show that the majority of emissions are particulate matter, fugitive in nature, and are generated by vehicle traffic on the unpaved roads. Also, the new August/04 emission factor for screening fines was doubled (from 0.149 to 0.3), so that activity emits much of the fugitive PM.

Table 2a - PM Emissions, Stone Processing Emissions Summary by Equipment

AP-42, 11.19.2 (8/04), Crushed Stone Processing
Calculation: Emissions (TPY) = (1.0- eff %) X Ton/hr X EF(lb/Ton) X Hr/yr X Ton/2,000 lb

SOURCE	Control Efficiency [a]	Emission Factor (lb/Ton)	Total PM Emissions (lb/hr)	Emissions 8,760 hr/yr (TPY)	Emission 2,080 hr/yr (TPY)
275 TPH 428 Trakpactor Crusher					
Crushing (tertiary)	70%	0.0054	0.446	1.951	0.463
Conveyor Transfer X 4	70%	0.003	0.990	4.336	1.030
Truck Unloading	70%	3.36E-05	0.003	0.012	0.003
			Total PM---------->	**6.300**	**1.496**
195 TPH Metro Trak Crusher					
Crushing (tertiary)	70%	0.0054	0.316	1.384	0.329
Conveyor Transfer X 4	70%	0.003	0.702	3.075	0.730
Truck Unloading	70%	3.36E-05	0.002	0.009	0.002
			Total PM---------->	**4.467**	**1.061**
200 TPH Mk II Powerscreen					
Screening (Fines)	70%	0.300	18.000	78.840	18.720
Conveyor Transfer X 4	70%	0.003	0.720	3.154	0.749
Truck Unloading	70%	3.36E-05	0.002	0.009	0.002
			Total PM---------->	**82.002**	**19.471**
500 TPH Turbo Chieftain 1400 Screener					
Screening	70%	0.025	3.750	16.425	3.900
Conveyor Transfer X 4	70%	0.003	1.800	7.884	1.872
Truck Unloading	70%	3.36E-05	0.005	0.022	0.005
			Total PM---------->	**24.331**	**5.777**
600 TPH Mk III Powergrid Screener					
Screening (fines)	70%	0.300	54.000	236.520	56.160
Conveyor Transfer X 2	70%	0.003	1.080	4.730	1.123
Truck Unloading	70%	3.36E-05	0.006	0.026	0.006
			Total PM---------->	**241.277**	**57.289**
400 TPH 4242 SR Impactor Crusher					
Crushing	70%	0.0054	0.648	2.838	0.674
Screening	70%	0.0250	3.000	13.140	3.120
Conveyor Transfer X 7	70%	0.003	2.520	11.038	2.621
Truck Unloading	70%	3.36E-05	0.004	0.018	0.004
			Total PM---------->	**27.034**	**6.419**
			TOTAL PM from CRUSHERS and SCREENS	**385.4**	**91.5**

a. Assumed 70% control efficiency for watering of stockpiles, unpaved roadways, and at the following transfer points with water spray nozzles: loading at the jaw crusher; transfer from built-in conveyor belt to radial conveyor; and transfer from radial conveyor to stockpile.

Table 2b- PM-10 Emissions Stone Processing Emissions Summary by Equipment

Calculation: Emissions (TPY) = (1.0- eff %) X Ton/hr X EF(lb/Ton) X Hr/yr X Ton/2,000 lb

SOURCE	Control Efficiency [a]	Emission Factor (lb/Ton)	PM-10 Emissions (lb/hr)	Emissions 8,760 hr/yr (TPY)	Emission 2,080 hr/yr (TPY)
275 TPH 428 Trakpactor Crusher					
Crushing (tertiary)	70%	0.0024	0.198	0.867	0.206
Conveyor Transfer X 4	70%	0.0011	0.363	1.590	0.378
Truck Unloading	70%	1.60E-05	0.001	0.006	0.001
		Total PM-10---------->		**2.463**	**0.585**
195 TPH Metro Trak Crusher					
Crushing (tertiary)	70%	0.0024	0.140	0.615	0.146
Conveyor Transfer X 4	70%	0.001	0.257	1.127	0.268
Truck Unloading	70%	1.60E-05	0.001	0.004	0.001
		Total PM-10---------->		**1.746**	**0.415**
200 TPH Mk II Powerscreen					
Screening (Fines)	70%	0.072	4.320	18.922	4.493
Conveyor Transfer X 4	70%	0.0011	0.264	1.156	0.275
Truck Unloading	70%	1.60E-05	0.001	0.004	0.001
		Total PM-10---------->		**20.082**	**4.768**
500 TPH Turbo Chieftain 1400 Screener					
Screening	70%	0.0087	1.305	5.716	1.357
Conveyor Transfer X 4	70%	0.0011	0.660	2.891	0.686
Truck Unloading	70%	1.60E-05	0.002	0.011	0.002
		Total PM-10---------->		**8.617**	**2.046**
600 TPH Mk III Powergrid Screen					
Screening (fines)	70%	0.072	12.960	56.765	13.478
Conveyor Transfer X 2	70%	0.0011	0.396	1.734	0.412
Truck Unloading	70%	1.60E-05	0.003	0.013	0.003
		Total PM-10---------->		**58.512**	**13.893**
400 TPH 4242 SR Impactor Crusher					
Crushing	70%	0.0024	0.288	1.261	0.300
Screening	70%	0.0087	1.044	4.573	1.086
Conveyor Transfer X 7	70%	0.0011	0.924	4.047	0.961
Truck Unloading	70%	1.60E-05	0.002	0.008	0.002
		Total PM-10---------->		**9.890**	**2.348**
TOTAL PM-10 from CRUSHERS and SCREENS				**101.3**	**24.1**

a. Assumed 70% control efficiency for watering of stockpiles, unpaved roadways, and at the following transfer points

with water spray nozzles: loading at the jaw crusher; transfer from built-in conveyor belt to radial conveyor; and transfer from radial conveyor to stockpile.

Table 3 - Summary PM Emissions
(All values in TPY except as noted.)

Crusher/Screen Unit & Assoc. Diesel Engine	Material Rate (TPH)	Operating Limit (Hr/Year)	Stone Process	Stock-Piles	Unpaved Roads	Stkpile Wind erosion	Diesel Eng. PM	TOTAL PM
Tracpactor Crusher	275	2080	1.5	2.43	14.9	0.42	0.68	19.93
3306 Caterpillar		1560	1.125	1.8225	11.175	0.315	0.51	14.95
		1040	0.75	1.215	7.45	0.21	0.34	9.97
Metro Track Crusher	195	2080	1.06	1.73	10.57	0.33	0.35	14.04
3116 Caterpillar		1560	0.795	1.2975	7.9275	0.2475	0.2625	10.53
		1040	0.53	0.865	5.285	0.165	0.175	7.02
MK II Powerscreen	200	2080	19.5	1.77	10.84	0.34	0.76	33.21
TS2 & TS3 Lister-Petter		1560	14.625	1.3275	8.13	0.255	0.57	24.91
		1040	9.75	0.885	5.42	0.17	0.38	16.61
Chieftain 1400 Screen	500	2080	5.78	4.42	27.1	0.62	1.04	38.96
Deutz BF4M		1560	4.335	3.315	20.325	0.465	0.78	29.22
		1040	2.89	2.21	13.55	0.31	0.52	19.48
MK III Screen	600	2080	57.3	5.31	32.52	0.7	0.63	96.46
Deutz F3L912		1560	42.975	3.9825	24.39	0.525	0.4725	72.35
		1040	28.65	2.655	16.26	0.35	0.315	48.23
4242 SR Impactor	400	2080	6.42	3.54	21.68	0.54	0.66	32.84
C9 DITA Caterpillar		1560	4.815	2.655	16.26	0.405	0.495	24.63
		1040	3.21	1.77	10.84	0.27	0.33	16.42

Table 4 - PM Emissions from Four Limiting Potential Configurations

From Spec. Cond. II- C.2	Maximum Operating Hr/Yr		
	PM Emissions(TPY)		
Configuration a	2080 Hr/yr	1560 Hr/yr	1040 Hr/yr
MK III Powerscreen	96.46	72.35	
MK II Powerscreen	33.21	24.91	
Total PM (TPY)	129.67	97.25	
Configuration b	2080 Hr/yr	1560 Hr/yr	1040 Hr/yr
MK III Powerscreen	96.46	72.35	
Trakpactor (or Metro Trak)	19.93	14.95	
Total PM (TPY)	116.39	87.29	
Configuration c	2080 Hr/yr	1560 Hr/yr	1040 Hr/yr
Chieftain 1400	38.96	29.22	19.48
MK II Powerscreen	33.21	24.91	16.61
Trakpactor	19.93	14.95	9.97
Metro Trak	14.04	10.53	7.02
Total PM	106.14	79.61	53.07
Total PM (shaded)(TPY)	96.40		
Configuration d	2080 Hr/yr	1560 Hr/yr	1040 Hr/yr

4242 SR Impactor	32.84		

As shown in the table, equipment configuration a and b requires that all the equipment in that scenario shall be limited to operating a maximum of 1,560 hours/yr in order to keep total PM emissions below 100 TPY. In configuration c, the Turbo Chieftain Screen must be limited to 1,560 hr/yr while the other 3 equipment can maintain their 2,080 hr/yr limit. And finally, there is no change in the operational limit for the 4242 SR Impactor in configuration d. The reduced operating hours for 12-month rolling periods for configuration a, b and c will be stipulated in the modification to CSP No. 0507-01-CT.

As was previously required, the Powergrid Powerscreen shall not be operated at the same location as the Turbo Chieftain 1400 or the 4242 SR Tracked Impactor with Sizing Screen. Other configurations utilizing less equipment than that noted above would result in smaller emissions (i.e., powerscreen and one crusher).

Table 5 - Emissions Summary (Stone Processing & Diesel Engines)[a]
Maximum Emissions Compared to CER, In House, & CDS Levels

POLLU-TANT	Stone Process-ing Plant	Agg Hand/ Storage Piles TPY	Un-paved Roads TPY	Stock-pile Wind Ero-sion TPY[b]	3306 Cater-pillar Diesel Engine TPY	3116TA Cater-pillar Diesel Engine TPY	TOTAL Emis-sions including fugitive TPY	CER Levels TPY	In House/ CDS Levels TPY[c]	Exempt Diesel Engines TPY[d]	TOTAL Emissions w/ Exempt Diesel Engines TPY
SOx	-	-	-	-	1.13	0.58	1.71	100	25/ 100	2.99	4.70
NOx	-	-	-	-	9.68	4.96	14.64	100	25/ 100	25.67	40.31
CO	-	-	-	-	2.08	1.07	3.15	1000	250/ 1000	5.53	8.68
PM	26.5	9.23	56.6	1.56	0.68	0.35	94.9	-	25/ 100	1.80	96.7
PM_{10}	7.34	4.9	13.26	1.71	0.68	0.35	28.2	100	25/ 100	1.80	30.0
VOC	-	-	-	-	0.79	0.41	1.20	100	25/ 100	2.10	3.30
Pb	-	-	-	-		-	-	5	5/ 5	-	

[a]TPY (except for exempt diesel engines) are calculated for Configuration c:
- Chieftain 1400 Screen operating 1,560 hr/yr
- Mk II Powerscreen operating 2,080 hr/yr
- Trakpactor and Caterpillar engine operating 2,080 hr/yr
- Metro Track and Caterpillar engine operating 2,080 hr/yr

For uncontrolled emissions at 8,760 hr/yr of operation and lb/hr emissions, see spreadsheets from original permit application review and spreadsheets attached.

[b] Wind erosion emissions from storage piles were calculated using AP-42, Table 11.12-2, 10/86, reformatted 1/95. See original permit application evaluation for details.

[c] Applicability of CDS reporting looks at emissions on a facility-wide basis and whether or not the facility is a covered source.

[d] Emissions for the exempt diesel engines are based on operations at 8,760 hours/year. Includes, per worst case scenario above, engines powering One (1) Turbo Chieftain (Duetz) and Mk II Powerscreen (TS2 and TS3 Lister-Petter).

Table 6 - Emissions Summary for Hazardous Air Pollutants (HAPS) [a]

POLLUTANT	3306 Caterpillar Diesel Engine Emissions (TPY)	3116TA Caterpillar Diesel Engine Emissions (TPY)	Exempt Diesel Engines Total Emissions at 8,760 hr/yr (TPY)	TOTAL Diesel Engine Emissions (TPY)
Benzene*	2.05e-03	1.05e-03	5.43e-03	8.53e-03
Toluene*	8.97e-04	4.60e-04	2.38e-03	3.74e-03
Xylenes*	6.25e-04	3.21e-04	1.66e-03	2.60e-03
Propylene*	5.66e-03	2.90e-03	1.50e-02	2.36e-02
1,3-Butadiene*	8.58e-05	4.40e-05	2.28e-04	3.57e-04
Formaldehyde*	2.59e-03	1.33e-03	6.87e-03	1.08e-02
Acetaldehyde*	1.68e-03	8.63e-04	4.46e-03	7.01e-03
Acrolein*	2.03e-04	1.04e-04	5.38e-04	8.46e-04
Naphthalene*	1.86e-04	9.55e-05	4.94e-04	7.75e-04
PAH*	3.69e-04	1.89e-04	9.78e-04	1.54e-03
TOTAL HAPS* (TPY)	1.42e-02	7.26e-03	3.76e-02	5.90e-02

* Hazardous air pollutants listed in the Clean Air Act and HAR 11-60.1 Subchapter 9.
PAH includes Naphthalene.
[a] TPY for Caterpillar 3306 and 3116TA engines are calculated for 2,080 hr/yr of operation. For uncontrolled emissions at 8,760 hr/yr of operation and lb/hr emissions, see spreadsheet and enclosures from original permit application review. Includes, per worst case scenario above, exempt engines powering One (1) Turbo Chieftain (Duetz) and Mk II Powerscreen (TS2 and TS3 Lister-Petter) operating at 8,760 hrs/yr.

A major source as defined in Section 11-60.1-1 of HAR Title 11, has the potential to emit any HAP of 10 TPY or more, or 25 TPY or more of any combination of HAPs, or 100 TPY or more of any air pollutant. Calculated emissions do not meet these limits and thus, this facility is not classified as a major 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 nonmajor through federally enforceable permit conditions (e.g., limiting the facility's hours of operation and limiting the facility's production rate). This facility remains a synthetic minor based on potential emissions (PM and PM-10) of greater than "major" levels (> 100 TPY) when the crushing and screening plants and diesel engines are operated at 8,760 hr/yr. (See Tables 2a and 2b) Operating permit limits make the facility nonmajor. Also see spreadsheets attached and enclosures from original permit evaluation for detailed calculations.

Air Quality Assessment:
The ambient air quality standards seek to protect public health and welfare and to prevent the significant deterioration of air quality. For new facilities and facilities proposing modifications, an ambient air quality assessment is required to analyze the maximum potential pollutant concentrations generated by a source and it's effect on the ambient air.

The Department of Health generally exempts an applicant from performing an ambient air quality impact analysis for (1) existing sources with no proposed modifications, (2) exempt activities, (3) fugitive emission sources (e.g., storage tanks, storage piles, pipe leaks, etc.), and (4) intermittent operating noncombustion sources.

This facility is proposing a minor modification with the addition of a second Turbo Chieftain 1400 screening plant and associated limits. Being that the Department of Health does not require an ambient air quality impact analysis for fugitive emissions of particulate, an ambient air quality impact analysis was not performed for the newly proposed screening plant. The Duetz diesel engine used to power this unit was determined to be an insignificant activity and thus an air quality impact analysis was not performed for this unit.

The existing permitted diesel engines were previously permitted with no changes and air quality assessments were done in concurrence with the processing of the previous permit application. The facility is not proposing any modifications to the currently permitted equipment, except for the reduction of maximum annual operating hours for some of the equipment configurations. Therefore an air quality analysis for these units was not performed at this time. Downwash effects considered in the previously performed Screen 3 modeling also remain unchanged with the addition of the second Turbo Chieftain 1400.

Significant Permit Conditions:

Revised and New Condition:

Condition: For each temporary stone processing plant location, the maximum amount of equipment shall be as follows:

a. Mk III Powergrid Powerscreen and One (1) Mk II Powerscreen;
b. Mk III Powergrid Powerscreen and One (1) crushing plant (Trakpactor or Metro Trak);
c. One (1) Mk II Powerscreen, One (1) Turbo Chieftain 1400 Powerscreen, and Two (2) crushing plants (Trakpactor and Metro Trak); or
d. 4242 SR Tracked Impactor with Sizing Screen.

Under no circumstances shall the MK III Powergrid Powerscreen be operated at the same location as the Turbo Chieftain 1400 Powerscreen or the 4242 SR Tracked Impactor with Sizing Screen.

The maximum annual operating hours for the equipment in each of the above configurations shall be as listed in the table below:

Configurations	Maximum Operating Hours, 12-month Rolling Basis
Configuration a	
MK III Powerscreen	1,560
MK II Powerscreen	1,560
Configuration b	
MK III Powerscreen	1,560
Trakpactor (or Metro Trak)	1,560
Configuration c	
Chieftain 1400	1,560
MK II Powerscreen	2,080
Trakpactor	2,080
Metro Trak	2,080
Configuration d	
4242 SR Impactor	2,080

Purpose: Reduction of operating hours for certain equipment configurations ensures that the combined emissions from simultaneous operation of various equipment at the same location would not result in any change of maximum potential emissions and would continue to maintain emission levels for each location below "major source" as defined in HAR §11-60.1-1.

Existing Conditions:

Condition: The 275 TPH portable crushing plant, the 195 TPH portable crushing plant, and the 400 TPH portable crushing and screening plant are subject to the provisions of the following federal regulations:

a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions; and
b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

Purpose: To specify the new unit as subject to the federal regulations listed above.

Condition: Neither the Turbo Chieftain 1400 Powerscreen nor the 4242 SR Tracked Impactor with Sizing Screen shall be used for the screening of fines. For the purposes of this permit, fines shall be defined as the screen output product having a maximum size of 0.50 centimeters (3/16th inch) (e.g., sand or soil).

Purpose: The applicant proposed not to process fines with either or these two units. Emission calculations for PM and PM10 were performed based on this assumption.

Condition: The exhaust stack servicing the 400 TPH 4242 SR Tracked Impactor with Sizing Screen (Caterpillar C-9 DITA) diesel engine shall be constructed to a minimum height of 15.5 feet (4.72 meters) above ground elevation.

Purpose: To ensure compliance with the ambient air quality standards (NO_2 and PM_{10}).

Existing 40 CFR Part 60 Subpart OOO provisions, operating hour limitations (2,080 hour in any rolling 12 month period), visible emissions provisions, and initial and annual source performance testing requirements currently specified and applicable to the existing crushing and screening plants shall also apply to the new crushing and screening unit. These conditions are generic as they may apply to any permitted crusher or screen, and remain without change.

Also, Special Condition C.6.c., requiring that for each location, the total emissions from the equipment covered by this Temporary Covered Source Permit shall not exceed the threshold limits for "major source" as defined in HAR §11-60.1-1, shall remain in effect.

Conclusion and Recommendation:
Actual emissions from this facility should remain lower than estimated because:

1) The calculated emissions for the proposed crushing and screening plant and associated diesel engine were based on the worst possible potential conditions (maximum rated capacity and fuel feed rate). Actual crushing and screening capacity will vary depending on product size and the type of material and will typically be less than the maximum capacity (i.e., the unit was evaluated at 400 TPH, per the manufacturer, the unit will more likely operate at 150 to 250 TPH).

2) There is no substantial change in maximum potential emissions at any location from the proposed minor modification, and PM emissions from any of the allowable equipment combinations will remain under 100 TPY. This was accomplished by reducing the maximum annual operating hours for some of the equipment in a few configurations, and by maintaining existing permit conditions (limiting configurations and location change requirements).

3) Calculated emissions from the previous permit application evaluation were conservative.

Based on the information submitted by Pineridge Farms, Inc., it is the preliminary determination of the Department of Health (DOH) that the proposed project will be in compliance with the Hawaii Administrative Rules (HAR), Chapter 11-60.1 and 11-59 and not cause or contribute to a violation of any State or National ambient air quality standard. Therefore, the Hawaii DOH intends to amend Temporary Covered Source Permit No. 0507-01-CT, subject to the significant permit conditions and EPA review.

This permit amendment, when issued, will replace and supersede Temporary Covered Source Permit No. 0507-01-CT, as issued on April 25, 2002 and amended on August 25, 2003 and February 2, 2004, in its entirety.