YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

1947 Galileo Ct. , Suite 103, Davis, CA 95618

Emission Evaluation

ATC # C-09-124
SIC Code # 4911
UTM E _____ km
UTM N _____ km

ENGINEER: Courtney Graham

FACILITY NAME: Woodland Biomass Power LTD.

LOCATION: The equipment is located at 1786 East Kentucky Avenue in Woodland. The equipment is not located within 1,000 feet of a K-12 school and is not subject to the requirements of H&S 42301.6.

PROPOSAL: The applicant is proposing to modify P-105-90(t) to add creosote treated railroad ties as an allowable fuel for the boiler.

PROCESS: 30 MW biomass boiler for power production

FLOW DIAGRAM: See file

EQUIPMENT: 330 MMBtu/hr Gotaverken circulating fluidized bed boiler, model no. 722-118; total air fan, 700 hp; primary air fan, 400 hp; two (2) 150 hp seal air blowers, 300 hp; recirculating air fan, 60 hp; induced draft fan, 1250 hp

CONTROL EQUIPMENT: Baghouse, 6 cell, 342 bags per cell, 156,500 cfm; thermal de-Nox system, variable flow 20,000 gallon NH3 tank; limestone injection

APPLICATION DATA:
The applicant has emission limits as permitted process limits and reports based on continuous monitor data. The same limits will be retained from the current permit.

Pollutant	Daily	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual (lbs)	Annual (tons)
VOC	420.0	37,800	38,220	38,640	38,640	131,200	65.60
CO	1188.0	106,920	108,108	109,296	109,296	371,200	185.60
Nox	631.2	56,808	57,439	58,070	58,070	197,200	98.60
Sox	316.8	28,512	28,829	29,146	29,146	99,000	49.50
PM10	172.8	15,552	15,725	15,898	15,898	54,000	27.00

ASSUMPTIONS:

		Units	Formula Symbol	Reference
Molar Volume =	385	SCF/mole	MV	District
Exhaust Flow Rate =	94,827	dscfm	SCFM	Source Test 5/27/10

EMISSION FACTORS:

		Units	Formula Symbol	Reference
VOC	0.05	lb/MMBtu	EFvoc	permit limit
CO	0.15	lb/MMBtu	EFco	permit limit
NOx	0.08	lb/MMBtu	EFnox	permit limit
SOx	0.04	lb/MMBtu	EFsox	permit limit
PM10 (front and back half)	0.010	gr/dscf	EFtsp	permit limit
PM10 (front half)	0.007	gr/dscf	EFpm	permit limit
NH3	50	ppmvd	EFnh3	permit limit

PERMIT LIMITS:		Units	Formula Symbol	Reference
VOC	17.50	lb/hr	Evoc	permit limit
CO	49.50	lb/hr	Eco	permit limit
NOx	26.30	lb/hr	Enox	permit limit
SOx	13.20	lb/hr	Esox	permit limit
TSP	7.20	lb/hr	Etsp	permit limit
PM10	7.20	lb/hr	Epm	permit limit

VOC	420.00	lb/day	Evoc2	permit limit
CO	1188.00	lb/day	Eco2	permit limit
NOx	631.20	lb/day	Enox2	permit limit
SOx	316.80	lb/day	Esox2	permit limit
TSP	172.80	lb/day	Etsp2	permit limit
PM10	172.80	lb/day	Epm2	permit limit

VOC	65.60	ton/yr	Evoc3	permit limit
CO	185.60	ton/yr	Eco3	permit limit
NOx	98.60	ton/yr	Enox3	permit limit
SOx	49.50	ton/yr	Esox3	permit limit
TSP	27.00	ton/yr	Etsp3	permit limit
PM10	27.00	ton/yr	Epm3	permit limit

RULE & REGULATION COMPLIANCE EVALUATION:

District Rule 2.3-Ringelmann
Visible emissions from the operation are expected to comply with the 20% opacity rule limit.

District Rule 2.5-Nuisance
The operation is expected to comply with the rule requirement of no discharge which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or the public. A condition will not be placed on the ATC, but will be added to the PTO upon implementation.

District Rule 2.11-Particulate Matter

Emission Rate	Allowable Rate	Compliance
0.010 gr/scf	0.1 gr/dscf	Yes

District Rule 2.12 Section A-Sulfur Compounds

SOx % = (SOx lb/day) * MV * (lb-mol/64 lb) * (1 day/1,440 min) / SCFM * 100% = 0.001 %

Emission Rate	Allowable Rate	Compliance
0.00 % SOx	0.2 % SOx	Yes

District Rule 2.16-Fuel Burning or Power Generation

Pollutant	Emission Rate	Allowable Rate	Compliance
SOx	13.2 lb/hr	200 lb/hr	Yes
NOx	26.3 lb/hr	140 lb/hr	Yes
TSP	7.2 lb/hr	40 lb/hr	Yes

District Rule 2.19-Particulate Matter Process Emission Rate*

Emission Rate (lb/hr)	Allowable Rate (lb/hr)**	Compliance
7.20	35	Yes

*It is assumed that TSP is equivalent to PM10 for this operation
**corresponding to a process rate of 25 tons/hr (50,000 lb/hr) (see email from source)

District Rule 2.27-Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters
This equipment unit is exempt from the provisions of this rule per section 111because this facility generates electricity for an electric utility.

District Rule 3.4-New Source Review

PROPOSED EMISSION SUMMARY FOR NEW OR MODIFIED PERMIT

	Daily	*Yearly*	
VOC	420.0 lb	65.60 tons	Use for annual billing
CO	1188.0 lb	185.60 tons	Use for annual billing
NOx	631.2 lb	98.60 tons	Use for annual billing
SOx	316.8 lb	49.50 tons	Use for annual billing
PM10	172.8 lb	27.00 tons	Use for annual billing

Quarterly

	1st	2nd	3rd	4th
VOC (lb)	37,800	38,220	38,640	38,640
CO (lb)	106,920	108,108	109,296	109,296
NOx (lb)	56,808	57,439	58,070	58,070
SOx (lb)	28,512	28,829	29,146	29,146
PM10 (lb)	15,552	15,725	15,898	15,898

Previous quarterly potential to emit for modified permit*

	1st	2nd	3rd	4th
VOC (lb)	37,800	38,220	38,640	38,640
CO (lb)	106,920	108,108	109,296	109,296
NOx (lb)	56,808	57,439	58,070	58,070
SOx (lb)	28,512	28,829	29,146	29,146
PM10 (lb)	15,552	15,725	15,898	15,898

* From PTO P-105-90(t)

Historic potential emissions for modified permit*

	1st	2nd	3rd	4th
VOC (lb)	37,800	38,220	38,640	38,640
CO (lb)	106,920	108,108	109,296	109,296
NOx (lb)	56,808	57,439	58,070	58,070
SOx (lb)	28,512	28,829	29,146	29,146
PM10 (lb)	15,552	15,725	15,898	15,898

* Offsets are continuously provided in accordance with California Health and Safety Code section 41605.5. Therefore, per Rule 3.4, Section 220, the historic potential emissions are equal to the potential to emit prior to modification.

Pollutant	Trigger (lb/day)	BACT Proposed (lb/day)	Quarterly Increase	BACT
VOC	10	420	No	No
CO	250	1188	No	No
NOx	10	631	No	No
SOx	80	317	No	No
PM10	80	173	No	No

OFFSETS

Quarterly permitted emissions for other permits at the stationary source*

	1st	2nd	3rd	4th
VOC (lb)	0	0	0	0
CO (lb)	0	0	0	0
NOx (lb)	0	0	0	0
SOx (lb)	0	0	0	0
PM10 (lb)	13,099	13,244	13,388	13,088

* See attached facility emissions sheet

Quarterly permitted emissions for the stationary source including proposed emissions

	1st	2nd	3rd	4th
VOC (lb)	37,800	38,220	38,640	38,640
CO (lb)	106,920	108,108	109,296	109,296
NOx (lb)	56,808	57,439	58,070	58,070
SOx (lb)	28,512	28,829	29,146	29,146
PM10 (lb)	28,651	28,969	29,286	28,986

Offset triggers

	1st	2nd	3rd	4th
VOC (lb)	7,500	7,500	7,500	7,500
CO (lb)	49,500	49,500	49,500	49,500
NOx (lb)	7,500	7,500	7,500	7,500
SOx (lb)	13,650	13,650	13,650	13,650
PM10 (lb)	13,650	13,650	13,650	13,650

Quantity of offsets required

	1st	2nd	3rd	4th
VOC (lb)*	0	0	0	0
CO (lb)**	0	0	0	0
NOx (lb)	0	0	0	0
SOx (lb)	0	0	0	0
PM10 (lb)*	0	0	0	0

MAJOR MODIFICATION

Facility Total Potential to Emit

65.85 TPY VOC
186.18 TPY CO
101.25 TPY NOx
49.54 TPY SOx
36.17 TPY PM10

Major Source Thresholds

25 TPY VOC
100 TPY CO
25 TPY NOx
100 TPY SOx
100 TPY PM10

Last five year emission aggregate

0.00 TPY VOC
0.00 TPY CO
0.00 TPY NOx
0.00 TPY SOx
0.00 TPY PM10

Major Modification Thresholds

25 TPY VOC
100 TPY CO
25 TPY NOx
40 TPY SOx
25 TPY PM10

Result: The proposed modification is not a major modification

PUBLIC NOTICE

"Increase in historic potential to emit"

0 lb VOC/quarter
0 lb CO/quarter
0 lb NOx/quarter
0 lb SOx/quarter
0 lb PM10/quarter

Exemption level for notification

7,500 lb VOC/quarter
49,500 lb CO/quarter
7,500 lb NOx/quarter
13,650 lb SOx/quarter
13,650 lb PM10/quarter

Result: Public notice is not required

District Rule 3.8-Federal Operating Permits

Per Section 102, this rule applies to all major sources, acid rain units subject to Title IV of the Federal Clean Air Act (CAA), solid waste incinerators, and any other sources specifically designated by the rule of US EPA.

The facility is a federal major source due to potential to emit over 25 tons VOC per year, 100 tons CO per year, and 25 tons Nox per year. The facility has an existing Title V Permit. Per District Rule 3.8, section 228, this is a significant modification of the Title V Operating Permit, therefore, notice will be given in accordance with section 409.1 of the rule. The facility has requested the District process the Title V amendments and this application concurrently through the provisions of enhanced New Source Review. The associated Title V permit number is F-00514-5.

District Rule 3.20-Ozone Transport Mitigation

This emissions unit does emit VOCs or NOx, and therefore, per section 110.3, this application is not exempt from this rule.

Annual permitted emissions for the stationary source including proposed emissions

VOC (lb)	131,700	lbs
NOx (lb)	202,500	lbs

Annual permitted emissions for equipment which is exempt from Rule 3.4*

VOC (lb)	500	lbs
NOx (lb)	5,300	lbs

* From PTOs P-51-94(t), P-52-94(t) for emergency engines

Post -project Stationary Source Potential to Emit (SSPE)

VOC (lb)	131,200	lbs
NOx (lb)	197,200	lbs

Because the post-project SSPE is greater than 10 tons (20,000) lbs per year for VOC or NOx, per section 301.1, calculations shall be performed to determine the quantity of mitigation required, if any.

Pre -project Stationary Source Potential to Emit (SSPE)

VOC (lb)	131,200	lbs
NOx (lb)	197,200	lbs

Quantity of offsets required by Rule 3.4

VOC (lb)	0	lbs
NOx (lb)	0	lbs

Quantity of Mitigation required by Rule 3.20

VOC (lb)	0	lbs
NOx (lb)	0	lbs

District Rule 3.23-Acid Deposition Control

This source is exempt from this rule per section 102 of the rule. Section 102 refers to the applicability in 40 CFR Part 72. Per section 72.6(b)(5), the facility is exempt if they are a qualifying facility that had a qualifying power purchase commitment to sell at least 15% of the total planned net output capacity (see email from source) and has an installed net output capacity not exceeding 130% of the planned net output capacity.

The source is a qualifying facility under section 72.2, which points to 16 USC 796 (Federal Power Act). The source meets the title 16, section 796 definition of qualifying facility under section (17)(A) and (17)(C) because it uses biomass as a primary fuel and has a capacity less than 80 MW.

Per section 72.2, the source had a qualifying power purchase commitment that was in effect on 11/15/90 that met the requirements of the definition (see email from source, attached).

District Risk Management Plan and Risk Assessment Guidelines

Because the application results in an increase of hazardous air pollutant (HAP) emissions, a screening risk assessment (prioritization) was performed. The RMPRAG requires that any new or modified emission unit satisfy Toxic-Best Available Control Technology (T-BACT) if its individual cancer risk is calculated to be between 1 and 10 in a million, or if its calculated hazardous index (acute or chronic) is greater than 1. The RMPRAG also considers any application or project having a total cancer risk above 10 in a million, unapproveable.

The permit holder has proposed the emission factors used in the table below, both in lb/hour and lb/year. The factors were derived from taking the maximum of either: (a) the original toxic source test at this site, (b) the toxic source test for hogwood only at a site in another district (Wheelabrator in Shasta County), or (c) the toxic source test for hogwood/rail tie combination at the Wheelabrator site. The source will be required to perform a toxics source test within 45 days of issuance of the ATC to show compliance with all proposed emission factors.

Pollutant	Pollutant	Maximum Emission Rate	Max. Annual Emssions at 8400 hours	Screening Level	Above Screening Level?
Name	CAS #	lb/hour	lbs/year	lbs/year	
1,1,1-Trichloroethane	71-55-6	1.0E-01	857.30	61800	no
Acetaldehyde	75-07-0	6.2E-03	51.71	72	no
Arsenic	7440-38-2	1.91E-03	16.07	0.024	yes*
Benzene	71-43-2	3.4E-02	281.57	6.7	yes*
Beryllium	7440-41-7	4.2E-05	0.36	0.015	yes*
Cadmium	7440-43-9	5.7E-05	0.48	0.046	yes*
Copper	7440-50-8	1.1E-01	944.33	463	yes*
Formaldehyde	50-00-0	2.0E-01	1,706.88	33	yes*
Hexavalent Chromium	18540-29-9	1.2E-04	1.00	0.0014	yes*
Lead	7439-92-1	6.6E-03	55.04	29	yes*
Manganese	7439-96-5	3.1E-01	2,600.14	77	yes*
Mercury	7439-97-6	5.6E-02	472.75	57.9	yes*
Methylene Chloride	75-09-2	9.5E-02	797.16	190	yes*

Selenium	7782-49-2	8.9E-02	750.29	96.5	yes*
Toluene	108-88-3	2.5E-01	2,102.69	38600	no
Total Chromium	7440-47-3	2.1E-02	172.99	n/a	no
Zinc	7440-66-6	4.5E-01	3,770.26	6760	no
Acenaphthalene	208-96-8	1.3E-03	11.03	n/a	no
Acenaphthene	83-32-9	1.2E-04	0.97	n/a	no
Acenaphthylene	208-96-8	2.5E-04	2.09	n/a	no
Anthracene	120-12-7	6.3E-04	5.33	n/a	no
Benzo(b)fluoranthene	205-99-2	3.1E-06	0.03	0.043	no
Benzo(k)fluoranthene	206-44-0	3.1E-06	0.03	0.043	no
Benzo-a-Anthracene	56-55-3	8.5E-07	0.01	0.043	no
Benzo-a-pyrene	50-32-8	3.0E-07	0.00	0.043	no
Benzo-ghi-perylene	191-24-2	1.3E-05	0.11	n/a	no
Chrysene	218-01-9	9.9E-07	0.01	n/a	no
Dibenzo-ah-Anthracene	53-70-3	3.0E-07	0.00	0.043	no
Fluoranthene	206-44-0	1.3E-03	11.01	n/a	no
Fluorene	86-73-7	2.4E-03	20.48	n/a	no
Indeno-123-cd-pyrene	193-39-5	3.0E-07	0.00	0.043	no
Naphthalene	91-20-3	4.8E-04	4.02	270	no
Phenanthrene	85-01-8	1.2E-02	99.47	n/a	no
Pyrene	129-00-0	1.2E-03	9.77	n/a	no
Total PAH	multiple	7.1E-02	596.73	n/a	no
Total PCB	multiple	1.5E-05	0.12	0.007	yes*
Total PCDD/PCDF	1746-01-6 & 5120-73-19	9.2E-08	7.69E-04	n/a	no

*Further toxics review is required of these constituents.
Because the emissions from several HAPs were above their respective prioritization levels, a health risk assessment was performed for this project. The dispersion modeling and health risks were evaluated using CARB's Hotspots Analysis Reporting Program (HARP) which accounts for site's specific parameters (e.g. stack height, stack location, meteorological data, etc.). The health risks are summarized below.

Summary of Health Risk Analysis:

The potential risk was estimated for the release associated with C-09-124 for the maximum risk at any point. The exposure for these receptors was modeled for both residential and worksite scenarios. The residential cancer risk has been modeled over a 70 year period, while the worksite risk has been modeled over 46 years. Per RMPRAG guidelines, the values summarized below are indicative of the point of maximum impact, therefore any other receptor would inherently be lower than the point of maximum impact (see attached results).

Receptor Type	Receptor No.	Acute Hazard Index (unitless)	Chronic Hazard Index (unitless)	Individual Cancer Risk (per million)
Residential	317	0.00892	0.0278	1.03
Worksite	358	0.0278	0.009	0.22

3. Evaluation of Best Available Control Technology for Toxic Air Contaminants* (T-BACT):

Is T-BACT Required (Max Risk > 1 in a million): No
Has T-BACT been proposed for the project: N/A
Based on the T-BACT proposal and the maximum ICR value calculated, the project is: Approvable

Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units Standards

60.40b Applicability and delegation of authority

The proposed equipment is subject to the following requirements in this section:
(a) Applicability standard- commences construction after June 19, 1984 and has a heat input capacity from fuel of greater than 29 MW or 100 MMBtu/hr.

Compliance Summary:
The proposed equipment is subject to the requirement. The District is currently delegated for this NSPS subpart and, therefore, the requirements of the subpart (revision 7/1/2006) will be evaluated below.

60.42b Standard for sulfur dioxide (SO2)

The proposed equipment is not subject to the requirements in this section. Section (a)-the boiler does not combust coal or oil, (b)-the boiler does not combust coal refuse, (c)-the boiler does not combust coal or oil or specific combinations, (d)-the boiler does not combust coal, oil, or coke oven gas and is not located in a non-continental area, (e-j)-the boiler is not subject to the requirements outlined, (k)-the boiler has not been constructed, reconstructed, or modified after Feb 28, 2005.

60.43b Standard for particulate matter

The proposed equipment is not subject to the following requirements in this section:
Section (a)-the boiler does not combust coal, (b-c)-boiler does not combust oil, (d)- the boiler does not combust municipal waste. (h)(1) The facility has not been modified after February 28, 2005.

The proposed equipment is subject to the following requirements in this section:
(e) The annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of wood, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) The boiler is subject to an opacity standard of 20% (6 minute average), except for one 6 minute period per hour of not more than 27% opacity.

(g) The PM and opacity standard shall apply at all times, except during periods of startup, shutdown, or malfunction.

Compliance Summary:
The permit will include a condition for the opacity standard in this section, specifically for in stack opacity purposes.

60.44b Standard for nitrogen oxides (NOx)

The proposed equipment is not subject to the following requirements in this section. Section (a-b)-the boiler does not combust coal, oil or natural gas, (c) the boiler does not combust coal or oil, (e) the boiler does not combust byproduct/waste (f)- the boiler does not combust byproduct/waste with natural gas or oil, (g) the boiler does not combust hazardous waste, (j-k) the boiler is not subject to the standards in this section, (l) the facility did not commence construction or reconstruction after July9, 1997.

The proposed equipment is subject to the following requirements in this section:
(d) The boiler is subject to a Nox standard of 0.30 lb/MMBtu heat input. This standard will be subsumed by the Rule 3.4 limit of 0.08 lb/MMBtu heat input on the permit for regular operation.

(h) The Nox standard applies at all times, including start up/shut down and malfunction

(i) the Nox standard is on a 30-day rolling average basis.

60.45b Compliance and performance test methods and procedures for sulfur dioxide

The proposed equipment is not subject to the following requirements in this section. The boiler is not subject to the standards in 60.42b for SO2 and is therefore not subject to the source test requirements.

60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides

The proposed equipment is not subject to the following requirements in this section:
Section (f) the boiler does not use a duct burner in a combined cycle system, (h) the facility is not subject to 60.44b(j), (i) the boiler is not combusting coke and is not located in a noncontinental region. (j) the facility does not have a PM CEMS

The proposed equipment is subject to the following requirements in this section:
(a) The PM and opacity standards under 60.43b shall apply at all times, except during periods of startup, shutdown, or malfunction. The Nox emission standards under 60.44b apply at all times.

(b) Compliance with the PM standards and opacity limits under 60.43b shall be determined through performance testing described in 60.46b(d).

(c) compliance with the Nox standards under 60.44b shall be determined through performance testing

(d) To determine compliance with the PM standards under 60.43b, the owner or operator shall conduct performance tests as required by the administrator.

(e) Compliance with the Nox limits under 60.44b shall be conducted using the continuous system for monitoring Nox under 60.48b.

(g) Maximum heat input capacity demonstrations may be required by the administrator at any time.

Compliance Summary:
The facility will be required to meet the outlined testing conditions.

60.47b Emissions monitoring for sulfur dioxide
The proposed equipment is not subject to the requirements in this section. The boiler is not subject to the standards in 60.42b for SO2 and is therefore not subject to the emissions monitoring requirements.

60.48b Emissions monitoring for particulate matter and nitrogen oxides
The proposed equipment is not subject to the following requirements in this section:
(g) The facility has a heat input capacity of greater than 250 MMBtu/hr. (h) The boiler does not have a duct burner (i) The facility is not subject to 60.44b(j) or (k). ((j) the facility does not have a PM CEMS, does not burn only liquid, does not burn coke, does not burn only gaseous fuels. (k) The facility does not have a PM CEMS.

The proposed equipment is subject to the following requirements in this section:
(a) The owner or operator of equipment subject to the standards of 60.43(b) shall install, calibrate, maintain and operate a continuous opacity monitoring system.

(b) The owner or operator of a facility subject to the Nox Standard under 60.44b shall install, calibrate, maintain, and operate a CEMS for Nox.

(c) the Nox CEMS shall be operated and data recorded during all periods of operation except for CEMS breakdown and repairs.

(d) The 1-hour Nox emission rates measured by the Nox CEMS shall be expressed in lb/MMBtu heat input and shall be used to calculate compliance emission rates.

(e) The span value for the COMS shall be between 60-80%. The Nox CEMS span value shall be 500 ppm.

(f) When nitrogen oxides emissions data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

Compliance Summary:
The facility has a COMS to meet this particulate monitoring requirements. The facility has a CEMS installed for Nox.

60.49b Reporting and recordkeeping requirements
The proposed equipment is not subject to the following requirements in this section:
The proposed equipment is not subject to the following requirements in this section. Section (a) - the boiler has already completed the initial startup (c)-the boiler is not subject to section 60.48b(g)(2), (e) the boiler does not fire on residual oil, (j-n) the boiler is not subject to SOx standards in 60.42(b), (r) the facility does not use fuel-based compliance alternatives.

The proposed equipment is subject to the following requirements in this section:
(b) The owner or operator shall submit initial performance test and evaluation of CEMS if applicable.

(d) The owner or operator shall record and maintain records of the amounts of fuel combusted during each day and calculate the annual capacity factor for wood for the reporting period. The annual capacity factor is determined on a 12 month rolling average basis with a new factor calculated at the end of each month. As an alternative the facility may record and maintain records of the amount of each fuel combusted during each calendar month

(f) Records of opacity will be required.

(g) The owner or operator must maintain the following records: calendar date, average hourly Nox emission rates, 30 day average Nox emission rates, operating days when the 30 day average is above the standard and reasons/corrective action, operating days when data was not recorded and reasons/corrective action, times when data was excluded from average and reasons, F factor calculation and method of determination and fuel combusted, times when pollutant concentration exceeded CEMS span, modifications to CEMS, and results of CEMS drift tests and accuracy assessments.

(h) The source is required to submit excess emissions reports.

(i) The source shall submit reports containing the information in section (g)

(o) All records are required to be retained for two years

(p) The following records shall be kept for each operating day: date, hours of operation, hourly steam load.

(q) A report shall be submitted with the following: annual capacity factor over previous 12 months, results of any Nox tests, hours of operation during the reporting period, and hours of operation since the last Nox test.

Compliance Summary:
The facility will be required per Rule 3.4 to maintain records of the fuel combusted on a daily basis.
Excess emission reports will be required to be submitted. All records will be maintained for five years.

40 CFR Part 64-Continous Assurance Monitoring (CAM)
The compliance assurance monitoring plan for this source was initially completed in 2003. No significant changes have been made to the plan since that time. There will be no changes made at this time since the criteria pollutant emission levels are not changing, nor is the control equipment for the criteria pollutants.

COMMENTS:

BACT is not triggered, public notice (per rule 3.4) is not required, and the proposal is not a major modification.

The following conditions have changed or have been added, as compared to the previous PTO:

-Creosote treated railroad ties have been added as an allowable source of fuel, as long as they are not designated as hazardous waste per CCR 66261.24.

-The railroad ties may not make up over 25% (by weight) of the total biomass fuel burned at any time. This was proposed by the applicant as a method for keeping the health risk low and because all of the source test data that exists on burning railroad ties in biomass plants had limited the mix to 25% ties with 75% hogwood.

-The emissions must be less than the allowable emissions listed in the Permitted Emission Limits table at all time, even during start up and shut down.

-The source will be required to perform a RATA at least once every 4 calendar quarters, per the CFR.

-Startups will be limited to less than 24 hours for a normal start and less than 96 hours for a curing startup.

-Toxic Air Contaminant Source testing requirements have been added, including emission limits and test methods.

RECOMMENDATIONS: Perform the required Rule 3.8 Title V noticing.

Engineer: _____ **Date:** 10/21/10

Reviewed by: _____ **Date:** 10/21/10

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

1947 Galileo Court, Suite 103, Davis, CA 95618

New Source Review

Quarterly Potential To Emit Determination

NSR Version 8/13/09

Evaluation to be used on existing permits to obtain their quarterly PTE

Engineer: Courtney Graham

SIC Code # 4911

Facility Name: Woodland Biomass

Location: 1786 Kentucky Avenue; Woodland

Date of Initial Quarterly PTE Determination: 12/11/2001
Date of Previous Quarterly PTE Determination: 03/16/2009
Date of Current Quarterly PTE Determination: 10/21/2010

CURRENT APPLICATIONS: **ATC's** C-08-234, C-09-124 **PTO's**

Process Description	Current Permits	VOC Emissions QTR 1 (lbs)	VOC QTR 2 (lbs)	VOC QTR 3 (lbs)	VOC QTR 4 (lbs)	VOC Annual (TPY)	CO Emissions QTR 1 (lbs)	CO QTR 2 (lbs)	CO QTR 3 (lbs)	CO QTR 4 (lbs)	CO Annual (TPY)	NOx Emissions QTR 1 (lbs)	NOx QTR 2 (lbs)	NOx QTR 3 (lbs)	NOx QTR 4 (lbs)	NOx Annual (TPY)	SOx Emissions QTR 1 (lbs)	SOx QTR 2 (lbs)	SOx QTR 3 (lbs)	SOx QTR 4 (lbs)	SOx Annual (TPY)	PM10 Emissions QTR 1 (lbs)	PM10 QTR 2 (lbs)	PM10 QTR 3 (lbs)	PM10 QTR 4 (lbs)	PM10 Annual (TPY)	Method of Quarterly PTE Determination: Policy - Daily Limits	Policy - Yearly Limits	Policy - Other Method	Permitted
Circulating fluidized bed boiler	P-105-90(t)	37,800	38,220	38,640	38,640	65.60	106,920	108,108	109,296	109,296	185.60	56,808	57,439	58,070	58,070	98.60	28,512	28,829	29,146	29,146	49.50	15,552	15,725	15,898	15,898	27.00		X		
	C-09-124	37,800	38,220	38,640	38,640	65.60	106,920	108,108	109,296	109,296	185.60	56,808	57,439	58,070	58,070	98.60	28,512	28,829	29,146	29,146	49.50	15,552	15,725	15,898	15,898	27.00				
Screening of sand	P-31-94(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	234	237	239	239	0.47		X		
Rice hull receiving, storage, shipping	P-34-94(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	582	582	582	582	0.40		X		
Hydrated lime storage and mixing	P-50-94(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	60	60	60	60	0.03		X		
Fuel material receiving, processing, and storage (excluding rice hulls)	P-61-39(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	11,537	11,695	11,793	11,793	10.43		X		
	C-08-234	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	7,396	7,478	7,560	7,560	6.68		X		
Cooling tower	P-74-94(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	2	2	2	2	0.01		X		
Hydrated lime receiving and storage	P-90-89(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	13	13	13	13	0.01		X		
Flyash loadout and transfer	P-91-89(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	675	683	690	690	1.37		X		
Clay/limestone receiving and storage	P-92-89(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	13	13	13	13	0.01		X		
Sand receiving and storage	P-93-89(t)	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	1	1	1	1	0.01		X		
Pre-project SSPE (lb/year)						131,200										197,200														
Post-project SSPE (lb/year)						131,200										197,200														
Pre-project Policy 25 PTE		37,800	38,220	38,640	38,640	65.60	106,920	108,108	109,296	109,296	185.60	56,808	57,439	58,070	58,070	98.60	28,512	28,829	29,146	29,146	49.50	26,660	26,981	29,291	28,991	39.74				
Post-project Policy 25 PTE		37,800	38,220	38,640	38,640	65.60	106,920	108,108	109,296	109,296	185.60	56,808	57,439	58,070	58,070	98.60	28,512	28,829	29,146	29,146	49.50	24,528	24,794	25,058	24,758	35.99				
Emergency IC Engine (690 BHP)	P-51-94(t)	393	393	393	393	0.20	900	900	900	900	0.45	4,137	4,137	4,137	4,137	2.07	63	63	63	63	0.03	284	284	284	284	0.14		X		
Emergency IC Engine (195 BHP)	P-52-94(t)	110	110	110	110	0.05	251	251	251	251	0.13	1,154	1,154	1,154	1,154	0.58	17	17	17	17	0.01	79	79	79	79	0.04		X		
Rule 3.2 Exempt Units Total PTE (lb/year)						500										5,300														

SUMMARY	VOC Emissions QTR 1 (lbs)	VOC QTR 2 (lbs)	VOC QTR 3 (lbs)	VOC QTR 4 (lbs)	VOC Annual (TPY)	CO Emissions QTR 1 (lbs)	CO QTR 2 (lbs)	CO QTR 3 (lbs)	CO QTR 4 (lbs)	CO Annual (TPY)	NOx Emissions QTR 1 (lbs)	NOx QTR 2 (lbs)	NOx QTR 3 (lbs)	NOx QTR 4 (lbs)	NOx Annual (TPY)	SOx Emissions QTR 1 (lbs)	SOx QTR 2 (lbs)	SOx QTR 3 (lbs)	SOx QTR 4 (lbs)	SOx Annual (TPY)	PM10 Emissions QTR 1 (lbs)	PM10 QTR 2 (lbs)	PM10 QTR 3 (lbs)	PM10 QTR 4 (lbs)	PM10 Annual (TPY)
Pre-project SSPE (lb/year)					131,200										197,200										
Post-project SSPE (lb/year)					131,200										197,200										
Pre-project Policy 25 PTE	37,800	38,220	38,640	38,640	65.60	106,920	108,108	109,296	109,296	185.60	56,808	57,439	58,070	58,070	98.60	28,512	28,829	29,146	29,146	49.50	26,660	26,981	29,291	28,991	39.74
Post-project Policy 25 PTE	37,800	38,220	38,640	38,640	65.60	106,920	108,108	109,296	109,296	185.60	56,808	57,439	58,070	58,070	98.60	28,512	28,829	29,146	29,146	49.50	24,528	24,794	25,058	24,758	35.99
FACILITY TOTAL PTE	38,303	38,723	39,143	39,143	65.85	108,071	109,259	110,447	110,447	186.18	62,099	62,730	63,361	63,361	101.25	28,592	28,909	29,226	29,226	49.54	24,891	25,157	25,421	25,121	36.17

Facility Policy 25 Post-Project Potential to Emit

	Quarter #1 (lb)	Quarter #2 (lb)	Quarter #3 (lb)	Quarter #4 (lb)	Yearly (lb)	Yearly (tons)
VOC	37,800	38,220	38,640	38,640	131,200	65.60
CO	106,920	108,108	109,296	109,296	371,200	185.60
NOx	56,808	57,439	58,070	58,070	197,200	98.60
SOx	28,512	28,829	29,146	29,146	99,000	49.50
PM10	24,528	24,794	25,058	24,758	72,340	36.17

OFFSET THRESHOLDS

	(lbs/qtr)
VOC	7,500
CO	49,500
NOx	7,500
SOx	13,650
PM10	13,650

PTE Comparison to NSR Triggers

Quarter #1	Quarter #2	Quarter #3	Quarter #4
Above	Above	Above	Above
Above	Above	Above	Above
Above	Above	Above	Above
Above	Above	Above	Above
Above	Above	Above	Above

Post-Project Stationary Source Potential to Emit (SSPE)

	Yearly
VOC	131,200
NOx	197,200

MITIGATION THRESHOLDS

	(lb/year)
VOC	20,000
NOx	20,000

SSPE Comparison to Rule 3.20 Triggers

Annual
Above
Above

COMMENTS: The following Changes were made to this PTE worksheet from the last update (3/16/09):
(1.) Emissions were added for ATCs C-09-124.

Engineer: CG **Date:** 10/21/10

Reviewed by: Susan Fitzgerald **Date:** 10/21/10

YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT
1947 Galileo Court, Suite 103, Davis, CA 95618

New Source Review
Last Five Year Activity

Evaluator: Courtney Graham
SIC Code # 4911
Date of Initial Five Year Determination: 11/8/2002
Facility Name: Woodland Biomass
Date of Previous Five Year Determination: 3/16/2009
Date of Current Five Year Determination: 10/21/2010
Location: 1786 East Kentucky Ave., Woodland, CA

List of Activities: C-09-124

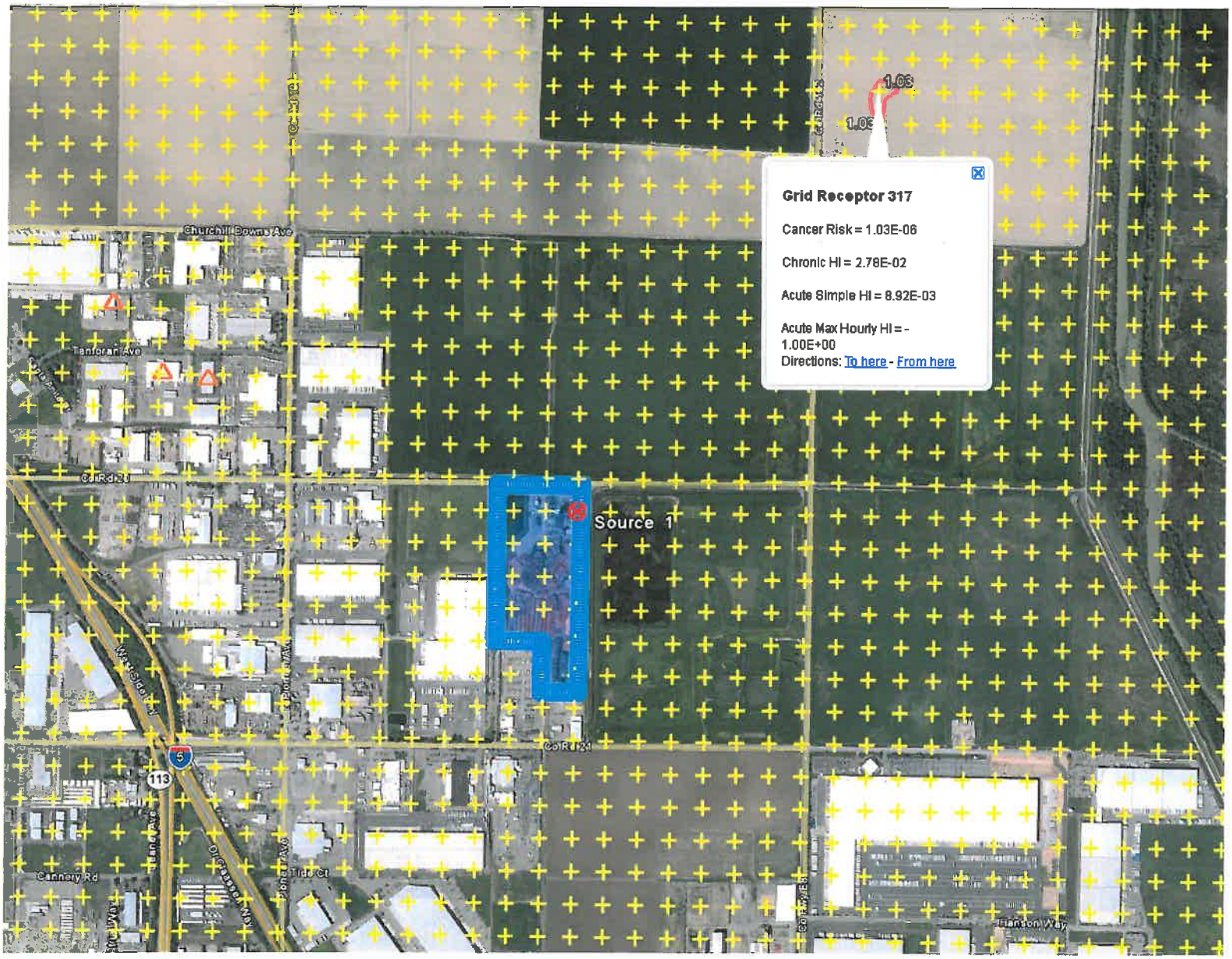
Equipment	Issued Permits	Date PTO issued	ATC	Date ATC Issued	VOC (tpy)	CO (tpy)	NOx (tpy)	SOx (tpy)	PM10 (tpy)
Rice Hull Rec.,Stor. and Ship.	P-34-94(t)	5/2/94	-	-	0.00	0.00	0.00	0.00	0.40
Emergency ICE	P-51-94(t)	7/19/94	-	-	0.05	0.11	0.52	0.01	0.04
Emergency Fire Pump	P-52-94(t)	7/19/94	-	-	0.01	0.03	0.14	0.00	0.01
Cooling tower	P-74-94(t)	9/30/94	-	-	0.00	0.00	0.00	0.00	0.01
Screening of Sand	P-31-94(t)	2/26/96	-	-	0.00	0.00	0.00	0.00	0.50
Hydrated Lime Stg&Mix	P-50-94(t)	2/26/96	-	-	0.00	0.00	0.00	0.00	0.03
Fuel matrl recvg, procs,& strg.	P-61-89(t)	2/26/96	-	-	0.00	0.00	0.00	0.00	10.43
Hydrated Lime recvng&strg	P-90-89(t)	2/26/96	-	-	0.00	0.00	0.00	0.00	0.01
Clay/lmstne rcvng&strg	P-92-89(t)	2/26/96	-	-	0.00	0.00	0.00	0.00	0.01
Sand recving&strge	P-93-89(t)	2/26/96	-	-	0.00	0.00	0.00	0.00	0.01
Circulating Fluidized Bed Boiler	P-105-90(t)	6/6/02	C-00-19	05/06/02	0.00	0.00	0.00	0.00	0.00
Flyash loadout&trnsfr	P-91-89(t)	1/3/03	C-02-119	12/12/2002	0.00	0.00	0.00	0.00	0.00
Fuel matrl recvg, grind, procs,& strg.			C-08-234	5/19/2009	0.00	0.00	0.00	0.00	0.00
Circulating Fluidized Bed Boiler			C-09-124		0.00	0.00	0.00	0.00	0.00
	TOTAL				**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

COMMENTS: These permits are sorted by date the ATC was issued. According to Rule 3.4 Section 221, a major modification is calculated based on all creditable increases and decreases from the source over the period of five consecutive years before the application, including the calendar year of the most recent application. Therefore the applicable years are September 2005 through September 2010.

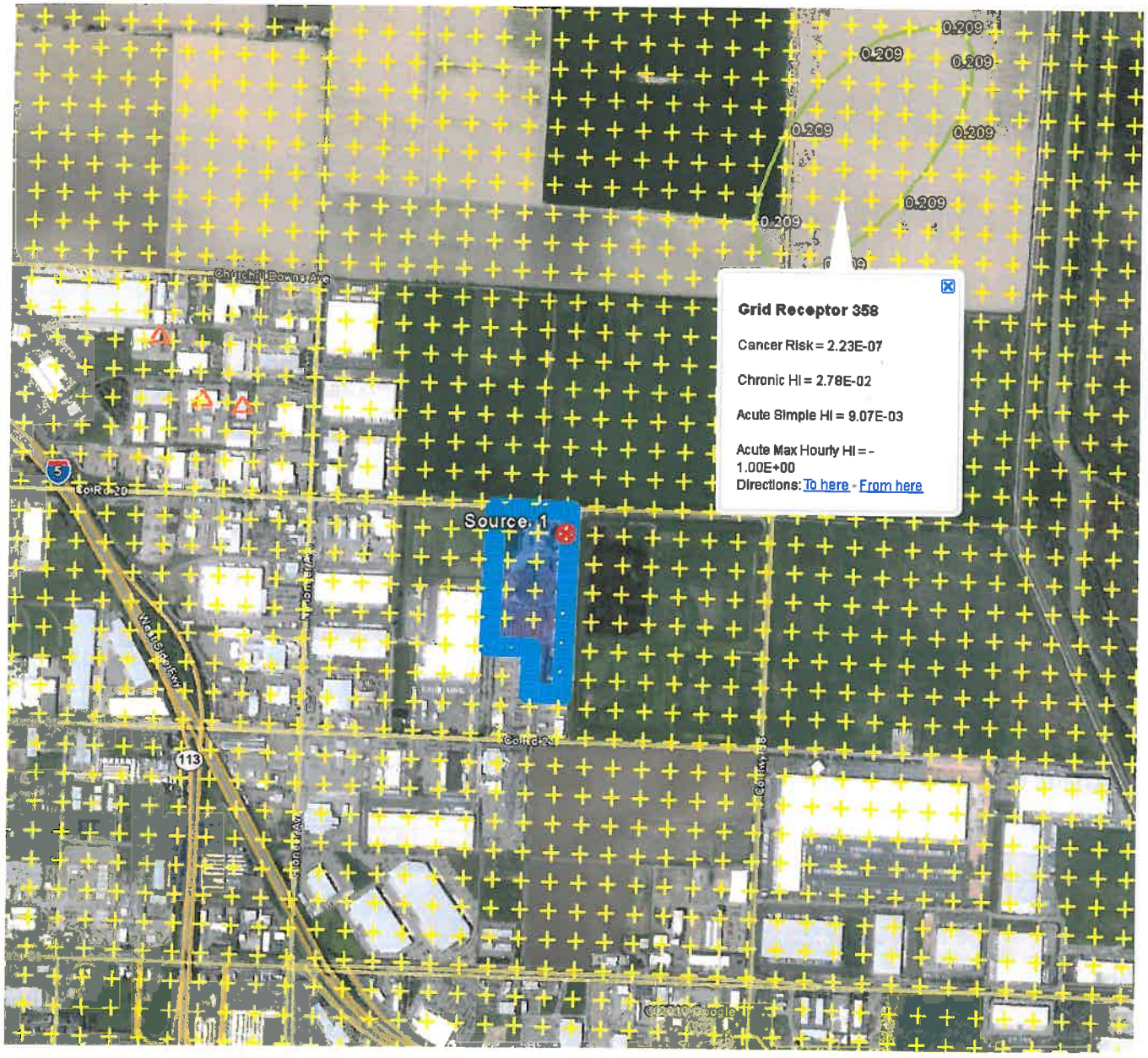
The following changes were made to this worksheet from the last update (3/16/2009):
(1) Added Last 5 Year Aggregate Emissions from ATCs C-09-124.

Engineer: CG (Typed Initials) **Date:** 10/21/10 (Typed Date 10/21/2010)

Reviewed by: **Date:** 10/21/10



Residential Risk C-09-124



C-09-124 Worksite Risk

ResidantialRisk

FILE: F:\ENGINEER\Software\HARP\HARP\Projects\2009\C09124\ResidantialRisk.txt

EXCEPTION REPORT
(there have been no changes or exceptions)

RECEPTORS WITH HIGHEST CANCER RISK

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
581	GRID	2.23E-09	1.68E-04	5.98E-04	609000	4282100	10
603	GRID	2.23E-09	1.68E-04	5.98E-04	608700	4282000	10
577	GRID	2.23E-09	1.68E-04	6.03E-04	608600	4282100	10
552	GRID	2.23E-09	1.68E-04	6.07E-04	608600	4282200	10
576	GRID	2.23E-09	1.68E-04	6.04E-04	608500	4282100	10
601	GRID	2.23E-09	1.68E-04	6.00E-04	608500	4282000	10
608	GRID	2.23E-09	1.68E-04	5.91E-04	609200	4282000	10
580	GRID	2.23E-09	1.68E-04	5.99E-04	608900	4282100	10
607	GRID	2.23E-09	1.68E-04	5.93E-04	609100	4282000	10
602	GRID	2.23E-09	1.68E-04	5.99E-04	608600	4282000	10
606	GRID	2.23E-09	1.68E-04	5.94E-04	609000	4282000	10
553	GRID	2.23E-09	1.68E-04	6.06E-04	608700	4282200	10
605	GRID	2.23E-09	1.68E-04	5.95E-04	608900	4282000	10
551	GRID	2.23E-09	1.68E-04	6.08E-04	608500	4282200	10
604	GRID	2.23E-09	1.68E-04	5.97E-04	608800	4282000	10
578	GRID	2.23E-09	1.68E-04	6.02E-04	608700	4282100	10
579	GRID	2.23E-09	1.68E-04	6.01E-04	608800	4282100	10
427	GRID	2.22E-09	1.68E-04	6.22E-04	608600	4282700	10
618	GRID	2.22E-09	1.68E-04	5.77E-04	610200	4282000	10
426	GRID	2.22E-09	1.68E-04	6.23E-04	608500	4282700	10

RECEPTORS WITH HIGHEST CHRONIC HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
554	GRID	2.22E-09	1.68E-04	6.04E-04	608800	4282200	10
535	GRID	2.22E-09	1.68E-04	6.01E-04	609400	4282300	10
581	GRID	2.23E-09	1.68E-04	5.98E-04	609000	4282100	10
611	GRID	2.22E-09	1.68E-04	5.87E-04	609500	4282000	10
577	GRID	2.23E-09	1.68E-04	6.03E-04	608600	4282100	10
539	GRID	2.22E-09	1.68E-04	5.96E-04	609800	4282300	10
576	GRID	2.23E-09	1.68E-04	6.04E-04	608500	4282100	10
476	GRID	2.22E-09	1.68E-04	6.18E-04	608500	4282500	10
608	GRID	2.23E-09	1.68E-04	5.91E-04	609200	4282000	10
610	GRID	2.22E-09	1.68E-04	5.89E-04	609400	4282000	10
607	GRID	2.23E-09	1.68E-04	5.93E-04	609100	4282000	10
477	GRID	2.22E-09	1.68E-04	6.17E-04	608600	4282500	10
606	GRID	2.23E-09	1.68E-04	5.94E-04	609000	4282000	10
592	GRID	2.22E-09	1.68E-04	5.83E-04	610100	4282100	10
605	GRID	2.23E-09	1.68E-04	5.95E-04	608900	4282000	10
478	GRID	2.22E-09	1.68E-04	6.16E-04	608700	4282500	10
604	GRID	2.23E-09	1.68E-04	5.97E-04	608800	4282000	10
590	GRID	2.22E-09	1.68E-04	5.86E-04	609900	4282100	10
579	GRID	2.23E-09	1.68E-04	6.01E-04	608800	4282100	10
479	GRID	2.22E-09	1.68E-04	6.15E-04	608800	4282500	10

RECEPTORS WITH HIGHEST ACUTE HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
809	SENSITIVE	2.19E-09	1.66E-04	6.38E-04	608441	4283858	10
153	GRID	2.20E-09	1.66E-04	6.37E-04	608700	4283800	10
127	GRID	2.19E-09	1.66E-04	6.37E-04	608600	4283900	10
152	GRID	2.20E-09	1.66E-04	6.37E-04	608600	4283800	10
130	GRID	2.19E-09	1.66E-04	6.37E-04	608900	4283900	10
151	GRID	2.20E-09	1.66E-04	6.37E-04	608500	4283800	10
126	GRID	2.19E-09	1.66E-04	6.37E-04	608500	4283900	10
807	SENSITIVE	2.20E-09	1.66E-04	6.37E-04	608601	4283646	10
129	GRID	2.19E-09	1.66E-04	6.37E-04	608800	4283900	10

ResidantialRisk

154	GRID	2.19E-09	1.66E-04	6.37E-04	608800	4283800	10
178	GRID	2.20E-09	1.66E-04	6.37E-04	608700	4283700	10
201	GRID	2.20E-09	1.66E-04	6.37E-04	608500	4283600	10
103	GRID	2.19E-09	1.65E-04	6.37E-04	608700	4284000	10
176	GRID	2.20E-09	1.66E-04	6.37E-04	608500	4283700	10
102	GRID	2.19E-09	1.65E-04	6.37E-04	608600	4284000	10
202	GRID	2.20E-09	1.66E-04	6.37E-04	608600	4283600	10
128	GRID	2.19E-09	1.66E-04	6.37E-04	608700	4283900	10
177	GRID	2.20E-09	1.66E-04	6.37E-04	608600	4283700	10
101	GRID	2.19E-09	1.65E-04	6.37E-04	608500	4284000	10
104	GRID	2.19E-09	1.65E-04	6.37E-04	608800	4284000	10

Worksiterisk

FILE: F:\ENGINEER\Software\HARP\HARP\Projects\2009\C09124\Worksiterisk.txt

EXCEPTION REPORT
(there have been no changes or exceptions)

RECEPTORS WITH HIGHEST CANCER RISK

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
358	GRID	2.23E-07	2.78E-02	9.07E-03	610787	4284438	10
317	GRID	2.23E-07	2.78E-02	8.92E-03	610787	4284538	10
277	GRID	2.22E-07	2.77E-02	8.73E-03	610887	4284638	10
318	GRID	2.22E-07	2.77E-02	8.81E-03	610887	4284538	10
357	GRID	2.22E-07	2.77E-02	9.14E-03	610687	4284438	10
276	GRID	2.21E-07	2.76E-02	8.50E-03	610787	4284638	10
398	GRID	2.20E-07	2.75E-02	9.34E-03	610687	4284338	10
236	GRID	2.20E-07	2.74E-02	8.26E-03	610887	4284738	10
316	GRID	2.20E-07	2.75E-02	8.84E-03	610687	4284538	10
399	GRID	2.19E-07	2.73E-02	9.10E-03	610787	4284338	10
278	GRID	2.19E-07	2.74E-02	8.40E-03	610987	4284638	10
237	GRID	2.19E-07	2.74E-02	8.42E-03	610987	4284738	10
359	GRID	2.19E-07	2.73E-02	8.66E-03	610887	4284438	10
235	GRID	2.18E-07	2.72E-02	8.32E-03	610787	4284738	10
275	GRID	2.17E-07	2.71E-02	8.76E-03	610687	4284638	10

RECEPTORS WITH HIGHEST CHRONIC HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
358	GRID	2.23E-07	2.78E-02	9.07E-03	610787	4284438	10
317	GRID	2.23E-07	2.78E-02	8.92E-03	610787	4284538	10
318	GRID	2.22E-07	2.77E-02	8.81E-03	610887	4284538	10
357	GRID	2.22E-07	2.77E-02	9.14E-03	610687	4284438	10
277	GRID	2.22E-07	2.77E-02	8.73E-03	610887	4284638	10
276	GRID	2.21E-07	2.76E-02	8.50E-03	610787	4284638	10
316	GRID	2.20E-07	2.75E-02	8.84E-03	610687	4284538	10
398	GRID	2.20E-07	2.75E-02	9.34E-03	610687	4284338	10
236	GRID	2.20E-07	2.74E-02	8.26E-03	610887	4284738	10
237	GRID	2.19E-07	2.74E-02	8.42E-03	610987	4284738	10
278	GRID	2.19E-07	2.74E-02	8.40E-03	610987	4284638	10
359	GRID	2.19E-07	2.73E-02	8.66E-03	610887	4284438	10
399	GRID	2.19E-07	2.73E-02	9.10E-03	610787	4284338	10
235	GRID	2.18E-07	2.72E-02	8.32E-03	610787	4284738	10
275	GRID	2.17E-07	2.71E-02	8.76E-03	610687	4284638	10

RECEPTORS WITH HIGHEST ACUTE HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
595	GRID	5.19E-08	6.48E-03	1.17E-02	609887	4283838	10
672	GRID	1.16E-08	1.44E-03	1.17E-02	609387	4283638	10
639	GRID	7.62E-08	9.52E-03	1.16E-02	610187	4283738	10
765	GRID	4.73E-08	5.91E-03	1.16E-02	610487	4283438	10
723	GRID	5.59E-08	6.99E-03	1.16E-02	610387	4283538	10
969	GRID	3.84E-08	4.80E-03	1.15E-02	610387	4282938	10
682	GRID	8.51E-08	1.06E-02	1.15E-02	610387	4283638	10
640	GRID	1.00E-07	1.26E-02	1.15E-02	610287	4283738	10
929	GRID	4.15E-08	5.18E-03	1.14E-02	610487	4283038	10
724	GRID	6.45E-08	8.06E-03	1.14E-02	610487	4283538	10
596	GRID	6.07E-08	7.58E-03	1.14E-02	609987	4283838	10
598	GRID	1.05E-07	1.31E-02	1.14E-02	610187	4283838	10
681	GRID	6.79E-08	8.48E-03	1.13E-02	610287	4283638	10
594	GRID	3.78E-08	4.72E-03	1.13E-02	609787	4283838	10
806	GRID	3.92E-08	4.90E-03	1.13E-02	610487	4283338	10
597	GRID	8.16E-08	1.02E-02	1.13E-02	610087	4283838	10
847	GRID	3.58E-08	4.48E-03	1.13E-02	610487	4283238	10

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s)	0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

HUMAN INGESTION

Fraction of ingested leafy vegetable from home grown source	0.15
Fraction of ingested exposed vegetable from home grown source	0.15
Fraction of ingested protected vegetable from home grown source	0.15
Fraction of ingested root vegetable from home grown source	0.15

PIGS, CHICKENS AND EGGS

HUMAN INGESTION

Fraction of ingested pig from home grown source	1
Fraction of ingested chicken from home grown source	1
Fraction of ingested egg from home grown source	1

ANIMALS' FEED

Fraction of pigs' feed from home grown crop	0.1
Fraction of chickens' feed from home grown crop	0.05

SOIL INGESTION

Fraction of pigs' feed eaten off the ground	0.1
Fraction of chickens' feed eaten off the ground	0.05

PIG FEED COMPOSITION

Fraction of feed that is exposed vegetable	0.25
Fraction of feed that is leafy vegetable	0.25
Fraction of feed that is protected vegetable	0.25
Fraction of feed that is root vegetable	0.25

CHICKEN FEED COMPOSITION

	SiteParameters
Fraction of feed that is exposed vegetable	0.25
Fraction of feed that is leafy vegetable	0.25
Fraction of feed that is protected vegetable	0.25
Fraction of feed that is root vegetable	0.25

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***