

Greenhouse Gas Reduction Projects

APPLICATION NO.	DATE APPLICATION SUBMITTED	APPLICATION STATUS	PLANT NO.	PLANT NAME	PROJECT DESCRIPTION	POTENTIAL GREENHOUSE GAS EMISSIONS CHANGE, CO2e (Metric TPY)	UNINTENDED CONSEQUENCES	Additional Comments
Early Action Measures								
23108	3/1/2011	P/O issued for A-23, A-24, A-25, A-26, A-27, and A-28, 04/25/2011	12417	Linear Technologies (Semiconductor - Milpitas)	Installation of Novellus Scrubbers with Burnboxes to burn and abate fluorinated gas C2F6, CF4	-400	Secondary emissions of NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion at the burn box. Emissions are 34, 29.0, 1.8, 0.01, 0.001 lb/yr, respectively	
23386	5/26/2011	P/O issued for A-12, 08/01/11	13635	JDS Uniphase (Semiconductor - San Jose)	Installation of a new Guardian 8 Burn Box, manufactured by MG Industries to burn fluorinated gases. CF4, C2F6, CHF3	-433	Secondary emissions of NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion at the burn box. Emissions are 46.4, 39.0, 2.6, 3.5, 0.3 lb/yr, respectively	source is exempt from permitting
23800	9/30/2011	P/O issued for A-13, 11/17/11	13635	JDS Uniphase (Semiconductor - San Jose)	Installation of a new Guardian 8 Burn Box, manufactured by MG Industries to burn fluorinated gases. CF4, C2F6, CHF3	-433	Secondary emissions of NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion at the burn box. Emissions are 46.4, 39.0, 2.6, 3.5, 0.3 lb/yr, respectively	source is exempt from permitting
25119	12/28/2013	P/O issued for A-16, 02/26/2013	13147	JDS Uniphase (Semiconductor - Milpitas)	Installation of a new plasma GHG abatement device for fluorinated gas (electric) SF6	-2298	No secondary emissions (electric).	
25248	3/4/2013	P/O issued for A-22, 7/15/13	10751	Micrel Semiconductor, Inc.	Installation of a new Ebara Model G5-A3 54,000 Btu/hr Incinerators abating fluorinated gases. C2F6, SF6, NF3	-12,679	Secondary emissions of CO2, NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion, and HF toxic emissions byproduct after scrubber.	Abatement device added to S-1 Semiconductor Fab.
26730	11/12/2014	Incomplete	10751	Micrel Semiconductor, Inc.	Installation of two new Ebara Model G5-A3 Incinerators abating greenhouse gases. N2O, C2F6	TBD	Secondary emissions of CO2, NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion, and HF toxic emissions byproduct after scrubber.	Abatement devices added to S-1 Semiconductor Fab.
24033	12/20/2011	P/O issued for A-11, 2/9/13	11329	Supertex, inc.	Installation of a new Centrotherm Model CT-BW-K3 1,060,000 Btu/hr Incinerator abating fluorinated gases. C2F6, SF6, NF3	-8,213	Secondary emissions of CO2, NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion, and HF toxic emissions byproduct after scrubber.	Abatement devices added to S-1 Semiconductor Fab.
25672	9/9/2013	P/O issued for A-4 and A-5, 2/24/14	14987	Fujifilm Dimatix	Installation of two new Edwards Atlas 300,000 Btu/hr incinerators abating fluorinated gases. CF4, SF6, CHF3, c-C4F8	-89,611	Secondary emissions of CO2, NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion, and HF toxic emissions byproduct after scrubber.	Abatement devices added to S-4 Semiconductor Fab.
23778	9/30/2011	P/O issued for A-553, 05/03/2012	646	Vishay Siliconix, Inc. (Semiconductor - Santa Clara)	Installation of two thermal processing units (TPUs) at S-509, Fab Area III, to burn and abate fluorinated gases	-3800	Secondary emissions of NOx, CO, POC, PM, and SO ₂ due to natural gas fuel combustion at the TPUs. Emissions are 209, 835, 5.6, 7.8, 0.6 lb/yr, respectively	Source is complying with CVD Chamber Cleaning and Etching Process Tier 1 emission standard of 0.2 Kg CO2e/cm2

26692	10/29/2014	incomplete	12417	Linear Technologies (Semiconductor - Milpitas)	Installation of CS Clean System EGS 300 Dry Chemical Scrubber to comply with AB32 Semiconductor Rule	TBD
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Projects with Greenhouse Gas Increases

25162	1/23/2013	PO issued for S-253, S-254, abated by A-110, A-111	11002	Applied Materials	Installation of a Metal Deposition Product Tool and an Etch Tool abated by two point-of-use thermal oxidizer/packed bed scrubbers to abate methane and fluorinated gases	800	No change in secondary emissions from existing point-of-use thermal oxidizer burning natural gas.	Increase in GHG CO ₂ e from fluorinated compounds limited to 800 MT of CO ₂ e to comply with the Calif. Global Warming Solutions Act of 2006 .	
26906	1/23/2015	Exemption issued 7/30/15	22881	Silevo		NF3 used to clean chambers used for making solar panels; old Solyndra location	~1200	Project does not require permit because of semiconductor exemption because VOC is not used. However, project is subject to ARB Semiconductor rule.	
27057	3/30/2015	Routed for PO on 7/30/15	15491	Finisar		Use of NF3 and SF3 to clean chambers; increase in VOC	800		GHG controlled by absorption, not point-of-use thermal oxidizer

Cap and Trade

24479	5/23/2012	A/C granted 10/15/12	11	Shell Martinez Refinery	Installation of an Air Preheater (APH) at S1763, CU Feed Heater	-6,974.00	Sulfur deposits and corrosion on the APH tube fins	
23341	5/13/2011	A/C granted 1/31/12; PO granted 2/23/12	14628	Tesoro Golden Eagle Refinery	50 Crude Unit AGO Modification Project. Replace a Steam Reboiler with a Reboiler using a Gas Oil Pumparound.	Not Quantified.	Permitting was problematic. Modification was in a grandfathered source, changed the refinery heat balance (taking more heat out of the gas oil lower product temperatures), and required an increase in firing rate at 4 grandfathered process heaters.	"Higher efficiency" may effectively debottleneck a refinery. Tesoro claimed the application was an alteration even though firing rates increased at 4 sources. Permit conditions were imposed to ensure this application was not a modification.
24713	8/2/2012	Incomplete	94	Cargill Salt	Replacement of multiple abatement devices by higher efficiency device	unknown	unknown	
24495	5/29/2012	Incomplete	1179	Redwood Landfill	Installation of a new 9.6 MW LFG to Energy Plant (six 2233 bhp LFG-fired IC engines) with electricity sold to grid		Net Increases in on-site PTE for NOx, CO, CO2e, but provides a renewable biogenic source of electricity, specific amounts will be provided as soon as data is available	Proposed project includes a LFG pre-treatment system and waste gas flare, post combustion oxidation catalysts and SCR
27330	7/8/2015	Incomplete	1597	Las Gallinas	Diversion of digester gas to transportation fuel	unknown	Sulfur in digester gas will still be burned at POTW's engine	