



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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Form G is for general air pollution sources. Use specific forms when applicable. If this source burns fuel, then also complete Form C.

- 1. Business Name: Plant No:
2. SIC No.: Date of Initial Operation
3. Name or Description: Source No.: S-
4. Make, Model, and Rated Capacity of Equipment:
5. Process Code1 Material Code2 Usage Unit2
6. Total throughput, last 12 mos. usage units2 Maximum operating rate: usage units2 /hr
7. Typical % of total throughput: Dec-Feb % Mar-May % Jun-Aug % Sep-Nov %
8. Typical operating times: hrs/day days/week weeks/year
9. For batch or cyclic processes: minutes/cycle minutes between cycles
10. Exhaust gases from source: Wet gas flowrate cfm at F
(at maximum operation) Approximate water vapor content volume%

EMISSION FACTORS (at maximum operating rate)

If this form is being submitted as part of an application for an authority to construct, completion of the following table is mandatory. If not, and the Source is already in operation, completion of the table is requested but not required.

If this source also burns fuel, do not include those combustion products in the emission factors below; they are accounted for on Form C. If source test or other data are available for composite emissions only, estimate from those data the emissions attributable to just the general process and show below.

Check box if factors apply to emissions after Abatement Device(s).

Table with 2 columns: Emission Factors lb/Usage Unit2 and Basis Code3. Rows include Particulate, Organics, Nitrogen Oxides, Sulfur Dioxide, Carbon Monoxide, and Other.

18. With regard to air pollutant flow from this source, what sources(s), abatement device(s) and/or emission point(s) are immediately downstream?

S- A- A- A-
P- P- P- P-

1See Tables G-1 through G-7 for code
3See Basis Code Table below

2See Table G5 or the Material Codes Table (available upon request)

Person completing this form:

Date:

Basis Code	
<b>Codes</b>	<b>Method</b>
0	Not applicable for this pollutant
1	Source Testing or other measurement <i>by plant</i>
2	Source Testing or other measurement <i>by BAAQMD</i>
3	Specification from vendor
4	Material balance <i>by plant</i> using engineering expertise and knowledge of process
5	Material balances <i>by BAAQMD</i> using engineering expertise and knowledge of process
6	Taken from AP-42 ("Compilation of Air Pollutant Emission Factors," E.P.A.)
7	Taken from literature, other than AP-42
8	Guess

Process Code Tables for General Air Pollution Sources (Data Form G)	
<b>Table</b>	<b>Process</b>
G-1	Food & Agricultural
G-3	Metallurgical (Secondary Metals)
G-4	Mineral
G-5	Petroleum Refining
G-7	Chemical/Other
G-8	Miscellaneous
G-9	Fugitive Emissions

**TABLE G-1  
FOOD AND AGRICULTURAL PROCESSES**

<u>CODE</u>	<u>PROCESS</u>
1028	Aging
1001	Brewing
1022	Cleaning
1021	Conveying/transferring
1003	Cooking
1020	Cooling/stoning
1004	Cotton ginning - cleaner
1005	Cotton ginning - stick/burr machine
1006	Cotton ginning - unloading fan
1026	Dehydration
1007	Direct fired kiln
1008	Direct fired roaster
1016	Dryer - rotary
1019	Dryer - spray
1023	Dryer - other
1009	Drying tower
1030	Extraction - mechanical
1029	Extraction - solvent
1027	Fermentation
1014	Grinding
1010	Indirect fired kiln
1011	Indirect fired roaster
1007	Kiln - direct fired
1010	Kiln - indirect fired
1012	Liquor aging
1013	Meat smoker
1024	Milling
1036	Mixing/blending
1025	Oven baking
1035	Packaging
1030	Pressing - extraction
1031	Pressing - other
1015	Prilling
1008	Roaster - direct fired
1011	Roaster - indirect fired
1016	Rotary dryer
1017	Screening
1018	Shipping & receiving
1019	Spray dryer
1032	Sterilization - food/pharmaceutical products
1020	Stoning/cooling
1034	Storage
1033	Sulfuring - fruit/food stuff
1021	Transferring/conveying
1999	Other/not specified

**TABLE G-3**

**METALLURGICAL (SECONDARY METALS)**

**DRYING (Kilns/Dryers/Ovens)**

3002 Calcining kiln  
 3003 Concentrate dryer  
 3004 Oxide kiln  
 3005 Other/not specified

**FURNACES**

3030 Bake furnace  
 3007 Blast furnace  
 3008 Casting furnace  
 3009 Crucible furnace  
 3010 Cupola  
 3011 Cupola furnace  
 3012 Electric arc furnace  
 3013 Flux furnace  
 3014 Heat treating furnace  
 3015 Horizontal muffle furnace  
 3016 Induction furnace  
 3017 Open hearth furnace  
 3018 Open hearth furnace w/ oxygen lance  
 3019 Pot furnace  
 3020 Retort furnace  
 3059 Reverberatory - rotary  
 3022 Reverberatory - sweat  
 3021 Reverberatory - other  
 3023 Rotary furnace - non-reverberatory  
 3024 Smelt-crucible furnace  
 3025 Smelt-reverberatory furnace  
 3026 Sweating furnace  
 3027 Other/not specified

**MATERIAL HANDLING/MISCELLANEOUS**

3062 Abrasives blasting  
 3078 Alodining  
 3029 Annealing  
 3065 Annealing - continuous  
 3063 Anodizing  
 3069 Buffing/polishing  
 3031 Can making operations  
 3046 Casting - miscellaneous  
 3033 Chlorination station  
 3062 Cleaning - abrasives blasting  
 3034 Cleaning - chemical  
 3076 Conveying  
 3068 Crushing/shredding  
 3035 Drawing  
 3036 Drilling  
 3037 Extruding

3047 Fabricating - miscellaneous  
 3039 Finishing - soak pit  
 3038 Finishing - other/not specified  
 3040 Foil converting  
 3041 Foil rolling  
 3042 Galvanizing  
 3043 Grinding  
 3044 Honing  
 3045 Lead oxide manufacturing  
 3067 Machine shop operations  
 3061 Milling/turning  
 3046 Miscellaneous casting  
 3047 Miscellaneous fabricating  
 3048 Mixing  
 3064 Non-destructive coating  
 3049 Paste mixer (lead batteries)  
 3072 Pickling  
 3050 Pitch treating (furnace electrode mfg)  
 3051 Plating (not chrome)  
 3070 Plating dec chrome-hexavalent <=500,000  
 amphr  
 3080 Plating dec chrome-hexavalent >500,000  
 amphr  
 3079 Plating dec chrome-trivalent  
 3071 Plating hard chrome-hexavalent  
 3081 Plasma metal application (thermal  
 spraying)  
 3052 Reaming  
 3073 Refining  
 3053 Rolling  
 3054 Sand handling  
 3055 Sanding  
 3056 Sawing  
 3077 Screening  
 3060 Sintering  
 3075 Soldering  
 3057 Storage  
 3074 Ventilation  
 3066 Welding  
 3999 Other/not specified

**TABLE G-4**  
**MINERAL PROCESSES**

**DRYING (Kilns/Dryers/Ovens)**

4002 Calcimatic kiln  
4082 Cement calcining kiln  
4003 Coke dryer  
4004 Curing oven  
4005 Fluidized bed kiln  
4006 Rotary dryer  
4070 Rotary kiln  
4007 Vertical kiln  
4008 Other/not specified

**FURNACES**

4010 Cupola  
4012 Electric furnace  
4011 Electric induction furnace  
4013 Reverberatory furnace - other  
4014 Reverberatory furnace - recupex  
4015 Reverberatory furnace - regenex  
4071 Rotary - non-reverberatory  
4016 Soda lime genl furnace (glass manufacturing)  
4072 Vertical furnace - other  
4017 Other/not specified

**MATERIAL HANDLING/MISCELLANEOUS**

4073 Abrasives blasting  
4019 Asphalt blowing  
4020 Asphalt dipping  
4077 Asphalt mixing - batch/continuous  
4078 Asphalt mixing - rotary drum  
4021 Asphalt spraying  
4022 Bagging  
4073 Blasting - abrasives cleaning  
4023 Blasting - quarry  
4024 Blow chamber  
4075 Calcining  
4025 Coal cleaning - therm/flash  
4026 Coal cleaning - therm/fluid bed  
4027 Coal cleaning - therm/multi low pd  
4028 Concrete batching - asbestos/cement products  
4029 Concrete batching - other  
4030 Conveying  
4031 Cooling  
4032 Crushing  
4033 Drying (open air)  
4034 Electric arc melting  
4035 Fiberizing

4036 Forming line (fiberglass manufacturing)  
4037 Furnace room venting  
4074 Glass enamel spraying  
4038 Glass manufacturing - batching  
4039 Glass manufacturing - material receiving  
4040 Glass manufacturing - material storage  
4041 Glass manufacturing - mixing  
4042 Glass manufacturing - molten holding tanks  
4043 Glass manufacturing - other/not specified  
4044 Grinding  
4045 Hold/shakeout  
4046 Hydrator  
4079 Loading - feed/surge/weigh bins  
4080 Loading/unloading (non-mining/quarry)  
4047 Milling  
4048 Mining/quarry - cobbing  
4053 Mining/quarry - crushing (primary)  
4054 Mining/quarry - crushing (secondary)  
4069 Mining/quarry - crushing (tertiary)  
4061 Mining/quarry - loading/unloading  
4049 Mining/quarry - open pit blasting  
4050 Mining/quarry - open pit cobbing  
4051 Mining/quarry - open pit drilling  
4052 Mining/quarry - ore concentrating  
4055 Mining/quarry - stockpiling  
4056 Mining/quarry - stripping  
4057 Mining/quarry - surface blasting  
4058 Mining/quarry - surface drilling  
4059 Mining/quarry - tailing piles  
4060 Mining/quarry - tailings  
4062 Mining/quarry - ventilating  
4068 Mining/quarry - other  
4081 Mixing operations  
4063 Road surfacing  
4073 Sand blasting  
4064 Screening  
4065 Sintering  
4066 Stone cutting  
4067 Storage - contained  
4076 Storage - open  
4037 Venting - furnace room  
4099 Other/not specified

**TABLE G-5  
PETROLEUM REFINING PROCESSES**

<u>CODE</u>	<u>PROCESS</u>	<u>CODE</u>	<u>MATERIAL</u>	<u>USAGE UNITS</u>
5040	Air Stripping/DAF processing	300	Waste Water	1000 barrels
5030	Alkylation	195	Hydrocarbons - olefinic	1000 barrels feed
5001	Asphalt oxidizer	30	Asphalt	tons processed
5002	Blow-down system - w/ controls	340	Crude oil *	1000 bbl/day ref cap
5003	Blow-down system - w/o controls	340	Crude oil *	1000 bbl/day ref cap
5004	Catalytic reforming	342	Cat reformer fresh feed	1000 barrels fresh feed
5023	Chemical treating - other	239	Feedstock	1000 barrels
5038	Coke storage piles (open)	80	Coke	tons
5025	Converting - other/not specified	239	Feedstock	1000 barrels
5005	Cooling tower	428	Water - brackish/sea	1000 gallons
5005	Cooling tower	415	Water - fresh	1000 gallons
5005	Cooling tower	300	Waste Water	1000 barrels
5018	Delayed coking	343	Delayed coke product	tons produced
5027	Distillation - crude	89	Crude oil	1000 barrels
5032	Distillation - vacuum	339	Vacuum distillation feed	1000 barrels
5028	Distillation - other	239	Feedstock	1000 barrels
5034	Flexicoking	346	Coker fresh feed	1000 barrels fresh feed
5007	Fluid cat cracker	344	FCC fresh feed	1000 barrels fresh feed
5008	Fluid coking - cooling	345	Fluid coke product	tons produced
5009	Fluid coking - general	346	Coker fresh feed	1000 barrels fresh feed
5010	Fluid coking - storage	345	Fluid coke product	tons produced
5011	Fluid coking - transportation	345	Fluid coke product	tons produced
5021	Hydrocracking	239	Feedstock	1000 barrels
5026	Hydrogen manufacturing	50	C1-C2 paraffins	million cubic feet
5026	Hydrogen manufacturing	52	C3+ paraffins	1000 barrels feed
5026	Hydrogen manufacturing	188	Naphtha	1000 barrels feed
5022	Hydrotreating/hydrofining	239	Feedstock	1000 barrels
5031	Isomerization	52	C3+ paraffins	1000 barrels feed
5039	Marine loading/unloading berths	80	Coke	tons
5017	Oil-water separator	300	Waste water	1000 barrels
5017	Oil-water separator	427	Process water	1000 gallons
5024	Polymerization	195	Hydrocarbons - olefinic	1000 barrels feed
5012	Process drain - w/controls	442	Waste water - sour	1000 barrels
5012	Process drain - w/controls	300	Waste water	1000 barrels
5013	Process drain - w/o controls	442	Waste water - sour	1000 barrels
5013	Process drain - w/o controls	300	Waste water	1000 barrels
5017	Separator - oil/water	300	Waste water	1000 barrels
5017	Separator - oil/water	427	Process water	1000 gallons
5014	Sludge converter	347	Sludge	tons produced
5029	Solvent extraction	***	(use specific Materials Code)	
5037	Sour water stripping	442	Waste water - sour	1000 barrels
5035	Sulfur removal - other/caustic	238	Refinery fuel gas	million cubic feet
5019	Thermal cracking	446	Thermal cracker fresh feed	1000 barrels feed
5020	Thermal processing - other	446	Thermal cracker fresh feed	1000 barrels feed
5032	Vacuum distillation	339	Vacuum distillation feed	1000 barrels
5015	Vacuum jet - w/ controls	339	Vacuum distillation feed	1000 barrels
5016	Vacuum jet - w/o controls	339	Vacuum distillation feed	1000 barrels
5033	Wastewater storage - ponds	300	Waste water	1000 gallons
5036	Wastewater storage - tanks	300	Waste water	1000 gallons
5993	Other/not specified	80	Coke	tons
5994	Other/not specified	89	Crude oil	1000 barrels
5995	Other/not specified	239	Feedstock	1000 barrels feed
5997	Other/not specified	339	Vacuum distillation feed	1000 barrels
5998	Other/not specified	338	Waste gases	million cubic feet
5999	Other/not specified	321	Other petroleum products	1000 gallons

**NOTE:** Each process listed in Table G-5 has a specific material associated with it for use on the G-Form.  
\*Code 340 for crude oil for these processes must be used; emissions are dependent on total refinery capacity rather than on throughput. Use code 89 for crude oil in any other process.

TABLE G-7

## CHEMICAL PROCESSES

7019	Air blow ml brine	7065	Phosphoric acid manufacturing - thermal
7020	Ammoniating	7066	Phosphoric acid manufacturing - wet process
7016	Ammonium sulfate mfg - NH <sub>3</sub> /H <sub>2</sub> SO <sub>4</sub> proc	7147	Phosphoric acid manufacturing - other
7018	Ammonium sulfate mfg - coke oven byprdcets	7154	Photographic equipment
7131	Biological oxidation	7067	Pressure treating - other
7021	Bodying oil	7068	Prilling
7022	Boiling tub	7153	Process tank
7023	Brine evaporation	7071	Pulpboard manufacturing
7096	Calcining - rotary kiln	7072	Pyrolysis
7024	Calcining - other	7073	Reactor - other/not specified
7030	Carbon black manufacturing - other process	7074	Regenerator
7132	Carbon dioxide liquifaction plant	7075	Rubberized fabric mfg - hot melt coating
7031	Carpet operation	7076	Rubberized fabric mfg - impregnation
7032	Caulking	7077	Rubberized fabric mfg - wet coating
7998	Chemical reaction - other/not specified	7078	Rubberized fabric mfg - other/not spec
7173	Chemical reactor – greater than 1000 gallons	7080	Scrubber
7073	Chemical reactor - other/not specified	7081	Seelite exhaust
7055	Claus - modified 2 stage	7160	Separating – DAF processing
7056	Claus - modified 3 stage	7103	Separating - oil/water
7057	Claus - modified 4 stage	7098	Separating - other
7033	Condensing	7290	Sewage - Digesters
7155	Contaminated ground water stripping	7270	Sewage - Disinfection
7156	Contaminated soil remediation	7230	Sewage - Flow equalization
7034	Cooking	7210	Sewage - Preliminary treatment
7035	Creosote pressure treating	7220	Sewage - Primary treatment
7114	Crystallizing	7300	Sewage - Reclamation
7036	Cyclohex - general	7250	Sewage - Secondary clarifiers
7151	Dipping/cleaning tank	7240	Sewage - Secondary treatment
7037	Distillation	7280	Sewage - Sludge handling processes
7133	Etching	7260	Sewage - Tertiary treatment
7038	Ethylene dichloride mfg - direct chlorination	7200	Sewage - Wastewater treatment plant
7039	Ethylene dichloride mfg - oxychlorination	7058	Sodium carbonate Solvay - NH <sub>3</sub> recovery
7023	Evaporation - brine	7059	Sodium carbonate Solvay - handling
7110	Evaporation - other	7060	Sodium carbonate Trona - calcining
7040	Fabrics manufacturing - bleaching	7061	Sodium carbonate Trona - dryer
7041	Fabrics manufacturing - yarn prep	7146	Sterilization - medical equipment
7042	Fabrics manufacturing - other/not specified	7089	Sulfate pulping - other/not specified
7152	Feed/holding tank	7082	Sulfate pulping - blow tank accumulator
7158	Gas collection system	7083	Sulfate pulping - fluidbed calciner
7044	Gas purging	7084	Sulfate pulping - liquor oxidation tower
7046	Gypsum pond	7085	Sulfate pulping - mult-effect evaporation
7130	Hydrochloric acid manufacturing	7086	Sulfate pulping - smelt dissolv tank
7148	Hydrochloric acid regeneration	7087	Sulfate pulping - turpentine condenser
7043	Injection – NO <sub>x</sub> control system	7088	Sulfate pulping - washer/screen
7144	Laboratory	7090	Sulfite pulping - digester
7145	Landfill with gas collection system	7091	Sulfite pulping - evaporator
7159	Landfill without gas collection system	7092	Sulfite pulping - liquor recovery
7132	Liquifaction - CO <sub>2</sub> plant	7093	Sulfite pulping - pulp digester
7053	Liquifaction - diaphragm	7094	Sulfite pulping - smelt tank
7054	Liquifaction - merc cell	7095	Sulfite pulping - other/not specified
7055	Mod-Claus 2 stage	7047	Sulfuric acid mfg - chamber process
7056	Mod-Claus 3 stage	7048	Sulfuric acid mfg - contact process
7057	Mod-Claus 4 stage	7050	Sulfuric acid mfg - other/not specified
7097	Neutralizing	7049	Sulfuric acid regenerators
7062	Nitration reactors	7157	Tank/drum/container cleaning
7051	Nitric acid - paraxylene gen	7073	Other chemical - reactor
7052	Nitric acid concentrators	7998	Other chemical reaction - other/not spec
7063	Nitric acid mfg - ammonia oxid new	7999	Other process/not specified
7064	Nitric acid mfg - ammonia oxid old		
7131	Oxidation, biological		

**TABLE G-8  
MISCELLANEOUS PROCESSES**

<b>DRYING (Dehydration/Kilns/Dryers/Ovens)</b>		7164	Composting - windows
7006	Natural gas dehydrating	7165	Composting - aerated static piles
7002	Pigment drying	7166	Composting - in-vessel
7003	Spray drying	7105	Cooling - pond
7004	Veneer drying	7104	Cooling - tower
7005	Drying - other/not specified	7106	Cooling - other
<b>MATERIAL HANDLING</b>		8011	Crematory retort
7116	Bagging/packaging	8003	Expanders - plastics, other
8007	Coke storage pile	8004	Extruders - plastics, other
7007	Drying	7045	Granulating
7045	Granulating	7143	Insulation stripping - wire
7008	Grinding	7143	Laser-stripping - wire insulation
7009	Loading - storage tank	7170	Latex dipping
7010	Loading - tank car	8005	Material working equipment - plastics, other
7108	Milling	7111	Molding/curing - plastics
7011	Mixing	7112	Molding/curing - rubber
7115	Pelletizing	7113	Molding/curing - other/not specified
7017	Pumping facility - organic liquids	8002	Oven
7012	Sanding	8006	Paper/paperboard handling equipment
7014	Storage	7109	Sand blasting
7013	Material handling - other/not spec	7079	Sawmill operation
<b>MISCELLANEOUS</b>		8008	Screening/Separating
7109	Abrasives blasting	8009	Shredding/Mangling/Cutting
7109	Cleaning - abrasives blasting	8012	Waste material grinding
8001	Coating operation - powder, other non-solvent	7161	Wastewater – industrial storage ponds
8010	Conveying	7143	Wire insulation stripping - laser
		7107	Woodworking - other/not specified
		8999	Other process - not specified

**TABLE G-9  
FUGITIVE EMISSION SOURCES**

<b>FUGITIVE EMISSIONS</b>	
9000	Combined fugitive emission sources
9010	Refinery flaring/blowdown
9070	Refinery pressure relief valves
9080	Refinery process drains
9040	Refinery process vessels
9060	Refinery pumps/compressors
9030	Refinery vacuum products
9050	Refinery valves/flanges