



**BAY AREA AIR QUALITY
MANAGEMENT DISTRICT**

939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

**PERMIT
TO OPERATE**

Plant# 723

Page: 1

Expires: JUL 1, 2007

This document does not permit the holder to violate any District regulation or other law.

Ron Pauer
Lawrence Berkeley National Laboratory
One Cyclotron Rd, Mailstop 85B0198
Berkeley, CA 94720

Location: One Cyclotron Road
Berkeley, CA 94720

S#	DESCRIPTION	[Schedule]	PAID
64	Misc CHEM, Sawdust, .005 tons/hr max SAWDUST COLLECTOR - WEST LOADING DOCK, BLDG. 74 Abated by: A64 Simple Cyclone Emissions at: P64 Stack	[exempt]	0
73	Misc CHEM, Sawdust, .005 tons/hr max SAW, SANDER, PLANER & JOINTER - BLDG. 76, ROOM 234 Abated by: A73 Dynamic Cyclone Emissions at: P73 Stack	[exempt]	0
74	Spray booth, Air atomized, 28.5 gal/yr solvent, Multi-coatings PAINT SPRAY BOOTH - WATER CURTAIN Abated by: A74 Liquid Separator Emissions at: P74 Stack	[E]	150
96	Spray booth, Electrostatic (air-atomized), 2.18 gal/yr solvent PAINT SPRAY BOOTH, AIR FILTERS Abated by: A96 Dry Filter Emissions at: P96 Stack	[E]	150
97	Misc CHEM, Sand abrasive, .01 tons/hr max SANDBLAST SHOP - BLDG. 77, ROO, 165A Abated by: A97 Baghouse, Shaking Emissions at: P97 Stack	[F]	150

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S#	DESCRIPTION	[Schedule]	PAID
104	Dryer, Electric Drying Oven Emissions at: P104 Stack	[exempt]	0
116	MTGL/SEC> Sawing, Aluminum, .5 tons/hr max Aluminum, Brass, Copper, Plastic Sheet Saw Abated by: A115 Simple Cyclone Emissions at: P116 Stack	[exempt]	0
124	Misc CHEM, Sulfur Hexafluoride, .75 pounds/hr max Sulfur Hexafluoride Chamber Abated by: A124 Vapor Recovery Emissions at: P124 Stack	[exempt]	0
130	Solvent cleaning, 59 deg F Cold Cleaner	[exempt]	0
147	Spray booth, Air atomized, 0 gal/yr solvent, 0 gal/yr clean-up EPOXY MIXING AND SPRAY HOOD	[E]	150
188	Solvent cleaning, 278 gal/yr net solvent, 59 deg F Facility-wide Wipe Cleaning	[E]	150
189	CHEM> Contaminated soil remediation, Contaminated soil vapor Soil Vapor Extraction System near Bldg. 7E Abated by: A189 Adsorption, Activated Carbon/Charcoal	[G1]	624
190	CHEM> Contaminated soil remediation, Contaminated soil vapor Soil Vapor Extraction System near Buildings 53 & 58 Abated by: A190 Adsorption, Activated Carbon/Charcoal Emissions at: P190 Stack	[G1]	624
191	STANDBY, Reciprocating Engine, Elect Gen, 3673 in3 displ Standby Generator Abated by: A191 Diesel Oxidation Catalyst Emissions at: P191 Stack	[B]	359
192	CHEM> Contaminated soil remediation, Contaminated soil vapor Soil Vapor Extraction System North of Building 7 Abated by: A196 Diesel Oxidation Catalyst Emissions at: P193 Stack	[G1]	624

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S#	DESCRIPTION	[Schedule]	PAID
193	STANDBY, Reciprocating Engine, Elect Gen, 661 in3 displ Diesel Standby Emergency Generator w/ Catalytic Convert Abated by: A196 Diesel Oxidation Catalyst Emissions at: P193 Stack	[B]	137
194	STANDBY, Reciprocating Engine, Elect Gen, 504 in3 displ Diesel Standby Emergency Generator Emissions at: P194 Stack	[B]	137
200	STANDBY, Reciprocating Engine, Elect Gen, 661 in3 displ Diesel Engine, Cummins model LTA10G1, emergency standby	[B]	137
201	STANDBY, Reciprocating Engine, Elect Gen, 504 in3 displ Diesel Engine, Cummins model C6TA8.3G1, emergency standby	[B]	137
202	STANDBY, Reciprocating Engine, Elect Gen, 855 in3 displ Diesel Engine, Cummins model NT855G2, emergency standby	[B]	137
203	STANDBY, Reciprocating Engine, Elect Gen, 1709 in3 displ Diesel Engine, Cummins model D342C, emergency standby	[B]	137
205	STANDBY, Reciprocating Engine, Elect Gen, 855 in3 displ Diesel Engine, Cummins model NTA855G2, emergency standby	[B]	137
206	STANDBY, Reciprocating Engine, Elect Gen, 552 in3 displ Diesel Engine, Detroit Allis model 6V92GDTA, emergency stan	[B]	137
207	STANDBY, Reciprocating Engine, Elect Gen, 611 in3 displ Diesel Engine, Cummins model LTA10G1, emergency standby	[B]	137
208	STANDBY, Reciprocating Engine, Elect Gen, 1648 in3 displ Diesel Engine, Caterpillar model 3412, emergency standby	[B]	137
209	STANDBY, Reciprocating Engine, Elect Gen, 359 in3 displ Diesel Engine, Cummins model 6BT5.9G1, emergency standby	[B]	137
210	STANDBY, Reciprocating Engine, Elect Gen, 505 in3 displ Diesel Engine, Cummins model 6CTA8.3G1, emergency standby	[B]	137
211	STANDBY, Reciprocating Engine, Elect Gen, 359 in3 displ Diesel Engine, Cummins model 6BT5.9, emergency standby	[B]	137

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S#	DESCRIPTION	[Schedule]	PAID
212	STANDBY, Reciprocating Engine, Elect Gen, 505 in3 displ Diesel Engine, Cummins model 6CT8.3G1, emergency standby	[B]	137
213	STANDBY, Reciprocating Engine, Elect Gen, 505 in3 displ Diesel Engine, Cummins model 6CT8.3G1, emergency standby	[B]	137
214	STANDBY, Reciprocating Engine, Elect Gen, 505 in3 displ Diesel Engine, Cummins model 6CTA8.3, emergency standby	[B]	137
215	STANDBY, Reciprocating Engine, Elect Gen, 552 in3 displ Diesel Engine, Detroit Allis model 6V92TA, emergency standb	[B]	137
216	STANDBY, Reciprocating Engine, Elect Gen, 855 in3 displ Diesel Engine, Cummins model NTA855G3, emergency standby	[B]	137
217	STANDBY, Reciprocating Engine, Elect Gen, 1150 in3 displ Diesel Engine, Cummins model KTA19, emergency standby	[B]	137
218	STANDBY, Reciprocating Engine, Elect Gen, 1709 in3 displ Diesel Engine, Cummins model NTA28G5, emergency standby	[B]	137
219	STANDBY, Reciprocating Engine, Elect Gen, 661 in3 displ Diesel Standby Emergency Generator w/Catalytic Convrtr Abated by: A219 Diesel Oxidation Catalyst Emissions at: P219 Stack	[B]	137

30 Permit Sources, 6 Exempt Sources

*** See attached Permit Conditions ***

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.



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*** PERMIT CONDITIONS ***

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Source# 74	subject to Condition	ID# 5581
Source# 147	subject to Condition	ID# 7472
Source# 188	subject to Condition	ID# 13887
Source# 189	subject to Condition	ID# 15965
Source# 190	subject to Condition	ID# 16752
Source# 191	subject to Condition	ID# 18073
Source# 192	subject to Condition	ID# 18309
Source# 193	subject to Condition	ID# 19880
Source# 194	subject to Condition	ID# 19533
Source# 200	" " "	ID# 19533
Source# 201	" " "	ID# 19533
Source# 202	" " "	ID# 19533
Source# 203	" " "	ID# 19533
Source# 205	" " "	ID# 19533
Source# 206	" " "	ID# 19533
Source# 207	" " "	ID# 19533
Source# 208	" " "	ID# 19533
Source# 209	subject to Condition	ID# 19535 and 19533
Source# 210	" " "	ID# 19533
Source# 211	" " "	ID# 19533
Source# 212	" " "	ID# 19533
Source# 213	" " "	ID# 19533
Source# 214	" " "	ID# 19533
Source# 216	" " "	ID# 19533
Source# 217	" " "	ID# 19533
Source# 218	" " "	ID# 19533
Source# 219	" " "	ID# 19533



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*** PERMIT CONDITIONS ***

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CONDITION ID #5581

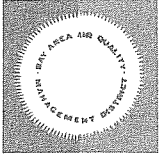
1. Net usage of adhesive at source S-74 shall not exceed 57 liters (15 gallons) in any consecutive twelve month period.
2. Total evaporation of clean-up solvent from adhesive spraying shall not exceed 7.6 liters (2 gallons) in any consecutive twelve month period.
3. The operator shall maintain a District approved log of all materials used in this operation. The log shall contain the following information:
 - a. coating, catalysts and reducer used (product identification numbers)
 - b. mix ratio of components used
 - c. VOC content of coating as applied
 - d. quantity of coating applied
 - e. identification of coating category
 - f. type and amount of solvent used for surface preparation and clean-up.

Entries with this information shall be made in the log for days during which coating activity at S-74 occurred. Periods of no coating activity shall also be noted in the log prior to the new entries. In addition, operator shall keep records on a monthly basis of type and amount of all solvents used for surface preparation and clean-up at this source. All records shall be retained for a period of 2 years from date of entry. This log book shall be kept on site and made available to District staff upon request.

CONDITION ID #7472

1. The maximum gross usage of epoxy components and catalyst at this source shall be 98 liters (26 gallons) in any 12 consecutive month period.
2. The maximum gross usage of the following clean-up solvents at S-147 shall be 144 liters (38 gallons) per year:

Methyl ethyl ketone, Isopropyl alcohol, Acetone, Xylene
3. The maximum gross usage of mold release at S-147 shall be 19 liters (5 gallons) per year.



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4. Operator shall apply for a change of permit conditions if a new toxic air contaminant is used in quantities that trigger a Toxic Risk Assessment.

5. Operator shall submit a yearly Low Usage Petition to the District for all low-usage coatings that do not comply with the VOC limits in Regulation 8, Rule 19.

6. Operator shall keep a log of the type and amount of all materials used at S-147. Entries with this information shall be made in a District approved log for days during which epoxy activity at S-147 occurred. Periods of no epoxy activity shall also be noted in the log prior to new entries. In addition, the operator shall keep records on a quarterly basis of the type and amount of all solvents used for surface preparation and clean-up at this source. Net solvent usage shall be calculated as the difference between solvent additions and removals. Records shall be kept on-site for at least two years from the date of entry and shall be made available to the District upon request. Net solvent usage shall be included in the facility-wide quarterly solvent use total.

CONDITION ID #13887

1) Total wipe cleaning solvent shall not exceed 2095 liters (553 gallons) of precursor organic solvents and 1315 liters (347 gallons) of non-precursor organic solvents in any consecutive 12 month period.

2) Records shall be maintained in a District approved logbook of the amount and type of wipe cleaning solvent used on a quarterly basis. Records shall be maintained for a period of at least 24 months from the date of entry and made readily available to District staff upon request.

CONDITION ID #15965

Conditions for S-189, Soil Vapor Extraction System at Plant 723, Lawrence Berkeley Lab

1. Source S-189 shall be vented at all times to A-189, at least two 150 lb minimum capacity activated carbon



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vessels arranged in series. Influent vapor flow shall not exceed 20 scfm. [BAAQMD Regulation 8-47-301]

- 2. The operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations: [BAAQMD Regulation 8-47-603]
 - a. At the inlet to the second to last carbon vessel in series.
 - b. At the inlet to the last carbon vessel in series.
 - c. At the outlet of the carbon vessel that is last in series prior to venting to the atmosphere.

When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purpose of these permit conditions.

- 3. These monitor readings shall be recorded in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of Carbon change-out necessary to maintain compliance with conditions number 4 and 5, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Permit Services Division must be received by the operator prior to a change to the monitoring schedule. [Recordkeeping]
- 4. The second to last Carbon vessel shall be changed out with unspent Carbon upon breakthrough, defined as the detection at its outlet of the higher of the following: [Cumulative Increase]
 - a. 10 % of the inlet stream concentration to the Carbon vessel.
 - b. 10 ppmv (measured as C1).
- 5. The last Carbon vessel shall be changed out with unspent Carbon upon detection at its outlet of 10 ppmv (measured as C1). [Cumulative Increase]
- 6. The operator of this source shall maintain the following records for each month of operation of the source: [Recordkeeping]
 - a. The hours and times of operation.



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- b. Each monitor reading or analysis result for the day of operation they are taken.
- c. The number of Carbon beds removed from service. All measurements, records and data required to be maintained by the operator shall be retained and made available for inspection by the District for at least two years following the date the data is recorded.
- 7. Any exceedance of conditions number 4 and/or 5 shall be reported to the Permit Services Division with the log as well as the corrective action taken. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well at the time of occurrence. [Recordkeeping]
- 8. Upon final completion of the remediation project, the operator of Source S-189 shall notify the Permit Services Division within two weeks of decommissioning the operation. [Recordkeeping]

CONDITION ID #16752

Conditions for S-190, Soil Vapor Extraction System
at Plant 723, Lawrence Berkeley Lab

- 1. Source S-190 shall be vented at all times to A-190, two 1000 lb capacity activated carbon vessels arranged in series. Influent vapor flow shall not exceed 215 scfm. <Offsets>
- 2. The operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations: <Recordkeeping>
 - a. At the inlet to the second to last carbon vessel in series.
 - b. At the inlet to the last carbon vessel in series.
 - c. At the outlet of the carbon vessel that is last in series prior to venting to the atmosphere.

When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purpose of these permit conditions.
- 3. These monitor readings shall be recorded in a monitoring log at the time they are taken. The



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monitoring results shall be used to estimate the frequency of Carbon change-out necessary to maintain compliance with conditions number 4 and 5, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Permit Services Division must be received by the operator prior to a change to the monitoring schedule. <Recordkeeping>

4. The second to last Carbon vessel shall be changed out with unspent Carbon upon breakthrough, defined as the detection at its outlet of the higher of the following: <Offsets>
 - a. 10 % of the inlet stream concentration to the Carbon vessel.
 - b. 10 ppmv (measured as C1).
5. The last Carbon vessel shall be changed out with unspent Carbon upon detection at its outlet of 10 ppmv (measured as C1). <Offsets>
6. The operator of this source shall maintain the following records for each month of operation of the source: <Recordkeeping>
 - a. The hours and times of operation.
 - b. Each monitor reading or analysis result for the day of operation they are taken.
 - c. The number of Carbon beds removed from service.
 All measurements, records and data required to be maintained by the operator shall be retained and made available for inspection by the District for at least two years following the date the data is recorded.
7. Any exceedance of conditions number 4 and/or 5 shall be reported to the Enforcement and Compliance Division with the log as well as the corrective action taken. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well at the time of occurrence. <Recordkeeping>
8. Upon final completion of the remediation project, the operator of Source S-190 shall notify the Permit Services Division within two weeks of decommissioning the operation. <Recordkeeping>



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CONDITION ID #18073

Conditions for Diesel Engine S-191, at Plant #723,
Lawrence Berkeley Lab

1. The S-191 engine is subject to the requirements of Regulation 9, Rule 1 ("Sulfur Dioxide"), and the requirements of Regulation 6 ("Particulate and Visible Emissions"). This engine may be subject to other District regulations, including Regulation 9, Rule 8 ("NOx and CO from Stationary Internal Combustion Engines") in the future.
[basis: Regulation 9, Rule 1; Regulation 6]
- 2a. S-191 shall be operated for no more than 315 hours in any consecutive 12 month period.
[basis: Regulation 2, Rule 1; Toxic Risk Screen]
- 3a. S-191 shall be equipped with a non-resettable totalizing counter which records hours of operation. [basis: Recordkeeping]
- 3b. The following monthly records shall be maintained in a District-approved log for at least 2 years and shall be made available to the District upon request:
 - 1) total hours of operation for S-191
 - 2) fuel usage at S-191
 [basis: Recordkeeping]
4. Diesel catalyst A-191 must be used at all times that S-191 is operated. A-191 must be able to reduce particulate emissions by at least 21%.
[basis: TBACT]

CONDITION ID #18309

Conditions for S-192, Soil Vapor Extraction System
at Plant 723, Lawrence Berkeley Lab

1. Source S-192 shall be vented at all times to A-193, A-194, and A-195, activated carbon vessels arranged in series. Influent vapor flow shall not exceed 125 scfm. <Offsets>
2. The operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations: <Recordkeeping>



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- a. At the inlet to the second to last carbon vessel in series.
- b. At the inlet to the last carbon vessel in series.
- c. At the outlet of the carbon vessel that is last in series prior to venting to the atmosphere.

When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purpose of these permit conditions.

- 3. These monitor readings shall be recorded in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of Carbon change-out necessary to maintain compliance with conditions number 4 and 5, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Permit Services Division must be received by the operator prior to a change to the monitoring schedule. <Recordkeeping>
- 4. The second to last Carbon vessel shall be changed out with unspent Carbon upon breakthrough, defined as the detection at its outlet of the higher of the following: <Offsets>
 - a. 10 % of the inlet stream concentration to the Carbon vessel.
 - b. 10 ppmv (measured as C1).
- 5. The last Carbon vessel shall be changed out with unspent Carbon upon detection at its outlet of 10 ppmv (measured as C1). <Offsets>
- 6. The operator of this source shall maintain the following records for each month of operation of the source: <Recordkeeping>
 - a. The hours and times of operation.
 - b. Each monitor reading or analysis result for the day of operation they are taken.
 - c. The number of Carbon beds removed from service.

All measurements, records and data required to be maintained by the operator shall be retained and made available for inspection by the District for at least two years following the date the data is recorded.



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- 7. Any exceedance of conditions number 4 and/or 5 shall be reported to the Permit Services Division with the log as well as the corrective action taken. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well at the time of occurrence. <Recordkeeping>
- 8. Upon final completion of the remediation project, the operator of Source S-192 shall notify the Permit Services Division within two weeks of decommissioning the operation. <Recordkeeping>

CONDITION ID #19533

CONDITIONS FOR NON "ESSENTIAL" EMERGENCY ENGINES:

Stationary Equipment Requirements

- 1. Hours of Operation: The owner/operator shall operate the emergency standby engine(s) only to mitigate emergency conditions or for reliability-related activities. Operating while mitigating emergency conditions is unlimited. Operating for reliability-related activities is limited to 100 hours per any calendar year. [Basis: Regulation 9-8-330]

"Emergency Conditions" is defined as any of the following:

- a. Loss of regular natural gas supply.
- b. Failure of regular electric power supply.
- c. Flood mitigation.
- d. Sewage overflow mitigation.
- e. Fire.
- f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor.

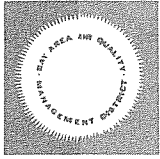
[Basis: Regulation 9-8-231]

"Reliability-related activities" is defined as any of the following:

- a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
- b. Operation of an emergency standby engine during maintenance of a primary motor.

[Basis: Regulation 9-8-232]

- 2. The owner/operator shall equip the emergency standby



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engine(s) with either:

- a. a non-resettable totalizing meter that measures the hours of operation for the engine; or
- b. a non-resettable fuel usage meter, the maximum hourly fuel rate shall be used to convert fuel usage to hours of operation.

[Basis: Regulation 9-8-530]

3. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 2 years and shall make the log available for District inspection upon request:

- a. Hours of operation (total).
- b. Hours of operation (emergency).
- c. For each emergency, the nature of the emergency condition.
- d. Fuel usage for engine(s) if a non-resettable fuel usage meter is utilized.

[Basis: Regulations 9-8-530 and 1-441]

CONDITION ID #19535

REQUIREMENTS FOR ENGINES LESS THAN 250 HP AND
INSTALLED BEFORE MAY 17, 2000:

Effective October 2, 2002 this condition has been deleted.

CONDITION ID #19880

Conditions for Diesel Engine S-193, at Plant #723

1. Hours of Operation: The owner/operator shall operate the emergency standby engine(s) only to mitigate emergency conditions or for reliability-related activities. Operating while mitigating emergency conditions is unlimited. Operating for reliability-related activities is limited to 100 hours per any calendar year. [Basis: Reg. 9-8-330]

2. "Emergency Conditions" is defined as any of the following:

- a. Loss of regular natural gas supply.
- b. Failure of regular electric power supply.



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- c. Flood mitigation.
 - d. Sewage overflow mitigation.
 - e. Fire.
 - f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor.
[Basis: Reg. 9-8-231]
3. "Reliability-related activities" is defined as any of the following:
- a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
 - b. Operation of an emergency standby engine during maintenance of a primary motor.
[Basis: Reg. 9-8-232]
- 4a. S-193 shall be equipped with a non-resettable totalizing counter which records hours of operation. [basis: Recordkeeping]
- 4b. The following monthly records shall be maintained in a District-approved log for at least 2 years and shall be made available to the District upon request:
- 1) total hours of operation for S-193
 - 2) fuel usage at S-193
[basis: Recordkeeping]
5. Diesel catalyst A-196 must be used at all times that S-193 is operated. A-196 must be able to reduce particulate emissions by at least 21%.
[basis: TBACT]

~~~~~ END OF CONDITIONS ~~~~~

| S#          | Source Description                         | Annual Average lbs/day |      |      |     |     |
|-------------|--------------------------------------------|------------------------|------|------|-----|-----|
|             |                                            | PART                   | ORG  | NOx  | SO2 | CO  |
| 64          | SAWDUST COLLECTOR - WEST LOADING DOCK, BLD | .02                    | -    | -    | -   | -   |
| 73          | SAW, SANDER, PLANER & JOINTER - BLDG. 76,  | -                      | -    | -    | -   | -   |
| 74          | PAINT SPRAY BOOTH - WATER CURTAIN          | -                      | .66  | -    | -   | -   |
| 96          | PAINT SPRAY BOOTH, AIR FILTERS             | -                      | .04  | -    | -   | -   |
| 97          | SANDBLAST SHOP - BLDG. 77, ROO, 165A       | -                      | -    | -    | -   | -   |
| 104         | Drying Oven                                | -                      | .01  | -    | -   | -   |
| 116         | Aluminum, Brass, Copper, Plastic Sheet Saw | -                      | -    | -    | -   | -   |
| 124         | Sulfur Hexafluoride Chamber                | -                      | -    | -    | -   | -   |
| 130         | Cold Cleaner                               | -                      | -    | -    | -   | -   |
| 147         | EPOXY MIXING AND SPRAY HOOD                | -                      | -    | -    | -   | -   |
| 188         | Facility-wide Wipe Cleaning                | -                      | 5.05 | -    | -   | -   |
| 189         | Soil Vapor Extraction System near Bldg. 7E | -                      | -    | -    | -   | -   |
| 190         | Soil Vapor Extraction System near Building | -                      | -    | -    | -   | -   |
| 191         | Standby Generator                          | .03                    | -    | .56  | -   | .02 |
| 192         | Soil Vapor Extraction System North of Buil | -                      | .03  | -    | -   | -   |
| 193         | Diesel Standby Emergency Generator w/ Cata | -                      | -    | .07  | -   | -   |
| 194         | Diesel Standby Emergency Generator         | -                      | -    | .06  | -   | .01 |
| 200         | Diesel Engine, Cummins model LTA10G1, emer | .02                    | .02  | .23  | -   | .05 |
| 201         | Diesel Engine, Cummins model C6TA8.3G1, em | .03                    | .03  | .39  | -   | .08 |
| 202         | Diesel Engine, Cummins model NT855G2, emer | .02                    | .02  | .25  | -   | .06 |
| 203         | Diesel Engine, Cummins model D342C, emerge | -                      | -    | .06  | -   | .01 |
| 205         | Diesel Engine, Cummins model NTA855G2, eme | -                      | -    | -    | -   | -   |
| 206         | Diesel Engine, Detroit Allis model 6V92GDT | -                      | -    | .1   | -   | .02 |
| 207         | Diesel Engine, Cummins model LTA10G1, emer | .03                    | .03  | .39  | -   | .08 |
| 208         | Diesel Engine, Caterpillar model 3412, eme | -                      | -    | .03  | -   | -   |
| 209         | Diesel Engine, Cummins model 6BT5.9G1, eme | -                      | -    | .03  | -   | -   |
| 210         | Diesel Engine, Cummins model 6CTA8.3G1, em | .02                    | .02  | .23  | -   | .05 |
| 211         | Diesel Engine, Cummins model 6BT5.9, emerg | .01                    | .01  | .15  | -   | .03 |
| 212         | Diesel Engine, Cummins model 6CT8.3G1, eme | -                      | -    | .07  | -   | .02 |
| 213         | Diesel Engine, Cummins model 6CT8.3G1, eme | -                      | -    | -    | -   | -   |
| 214         | Diesel Engine, Cummins model 6CTA8.3, emer | .02                    | .02  | .22  | -   | .05 |
| 215         | Diesel Engine, Detroit Allis model 6V92TA, | -                      | -    | -    | -   | -   |
| 216         | Diesel Engine, Cummins model NTA855G3, eme | .02                    | .02  | .24  | -   | .05 |
| 217         | Diesel Engine, Cummins model KTA19, emerge | -                      | -    | .03  | -   | -   |
| 218         | Diesel Engine, Cummins model NTA28G5, emer | .02                    | .02  | .26  | -   | .06 |
| 219         | Diesel Standby Emergency Generator w/Catal | -                      | -    | .07  | -   | -   |
| T O T A L S |                                            | .25                    | 6.03 | 3.44 | .06 | .63 |



\*\* PLANT TOTALS FOR EACH EMITTED TOXIC POLLUTANT \*\*

| Pollutant Name        | Emissions lbs/day |
|-----------------------|-------------------|
| -----                 | -----             |
| Formaldehyde          | .03               |
| Isopropyl alcohol     | .52               |
| Methyl alcohol        | .47               |
| 1,1,1-Trichloroethane | .04               |



**BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT**

939 ELLIS STREET  
SAN FRANCISCO, CALIFORNIA 94109  
(415) 771-6000

**PERMIT  
TO OPERATE**

G# 6134

Page: 1

Expires: Jul 1, 2007

This document does not permit the holder to violate any District regulation or other law.

Lawrence Berkeley Laboratory  
One Cyclotron Rd, MS 75B 101  
Berkeley, CA 94720

(510) 486-7614

ATTN: Lawrence Berkeley Laboratory <----- Permitted Operator

G# 6134 GASOLINE DISPENSING FACILITY

Lawrence Berkeley Laboratory  
One Cyclotron Rd, MS 75B 101  
Berkeley, CA 94720

Nozzles, Gasoline: 1 ea EW A3003/A3005  
1 ea OPW 11VF

Vapor Recovery (Phase 1): Two Point, EVR certified

Vapor Recovery (Phase 2): Balance

Tanks: 10000 gal, 4000 gal

This permit is valid only for the Permitted Operator shown above. A new operator must apply for transfer. Please be advised that District inspectors may visit your facility without notice in order to determine compliance with District Regulations.

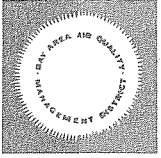
PERMIT SUBJECT TO FOLLOWING CONDITIONS:

#21568 CONDITIONS FOR 4,000 GALLON HOOVER AST DISPENSING E85 FUEL AND OPERATING UNDER CARB TEST-SITE DESIGNATION

1. Only E85 fuel may be dispensed from this tank. Total fuel dispensed from this tank shall not exceed 50,000 gallons in any 12-consecutive month period.

2. Applicant shall maintain monthly records of the amount of E85 dispensed. All records shall be maintained for two years from the date of entry, and be available for inspection on District Staff on request.

3. The vapor condensate trap shall be monitored, and drained if necessary, on a monthly basis. Applicant shall maintain a log containing date of condensate trap inspection and amount of gasoline collected and drained.



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Log shall be available for inspection on District Staff on request.

4. The applicant shall notify Source Test via FAX at (415) 749-4922, 48 hours prior to conducting any of the tests required by CARB in the test site designation letter dated April 25, 2003. Copies of all test results shall be forwarded to the District Source Test Manager within twenty (20) days of the test date.

5. All dispensing must immediately cease, and all equipment be removed within 60 days of the date: a) the applicant notifies CARB that certification is not possible; or, b) CARB denies the application for certification.

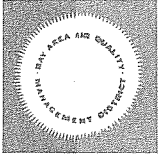
6. This facility is operating under a test site designation that expires on May 1, 2005. Operation is not authorized beyond this date unless CARB has certified both the Phase I and Phase II vapor recovery equipment in use and the equipment is in compliance with all applicable District regulations.

7. Within 90 days of obtaining CARB certification of both the Phase I and Phase II vapor equipment in use, applicant shall submit a complete permit application to the District to modify the Permit to Operate for this tank to be consistent with the new certifications.

#14098 Pursuant to BAAQMD Toxic Section Policy, this facility's annual gasoline throughput shall not exceed 940,000 gallons in any consecutive 12 month period.

#20666 1. The OPW EVR Phase I Vapor Recovery System, including all associated plumbing and components, shall be operated and maintained in accordance with the most recent version of California Air Resources Board (CARB) Executive Order VR-102. Section 41954(f) of the California Health and Safety Code prohibits the sale, offering for sale, or installation of any vapor control system unless the system has been certified by the state board.

2. The owner or operator shall conduct and pass a Rotatable Adaptor Torque Test (CARB Test Procedure TP201.1B) and either a Drop Tube/Drain Valve Assembly Leak Test (TP201.1C) or, if operating drop tube overflow prevention devices ("flapper valves"), a Drop Tube Overflow Prevention Device and Spill Container Drain Valve Leak Test (TP201.1D) at least once in each 36-



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month period. Measured leak rates of each component shall not exceed the levels specified in VR-102. Results shall be submitted to BAAQMD within 15 days of the test date in a District-approved format.

~~~~~  
ANNUAL RENEWAL

Invoice #24685 payment received Jun 15, 2006