



City of Omaha

Public Works Department

Air Quality Division
5600 South 10th Street
Omaha NE 68107-3501
Phone: (402) 444-6015
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PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

AIR EMISSION CONSTRUCTION PERMIT

FOR

AMERICAN LABORATORIES, INC.

5020 S. 33rd Street

Omaha, NE 68107

Effective Date: January 4, 2012

Omaha Air Quality Control
5600 S. 10th Street
Omaha, NE 68107-3501
(402) 444-3915

SOURCE IDENTIFICATION

OMAHA AIR QUALITY CONTROL CONSTRUCTION PERMIT

Class I, Permit No. C111317

Issue Date: January 4, 2012

Effective Date: January 4, 2012

In accordance with the provisions of the Omaha Municipal Code, Chapter 41 - Air Quality Control,

American Laboratories, Inc.
4410 S. 102nd Street
Omaha, NE 68127

is authorized to construct the emission units shown in Table A-1 at:

5020 S. 33rd Street
Omaha, NE 68107

The equipment indicated is subject to the terms and conditions shown in Table A-2 and to the other terms and conditions specified in this permit.

The permit is issued pursuant to and consistent with the requirements of Title 129, Chapter 19 of the Nebraska Department of Environmental Quality and the Omaha Municipal Code, Section 41-2, which incorporates Nebraska DEQ Title 129, Chapter 19: Prevention of Significant Deterioration of Air Quality.

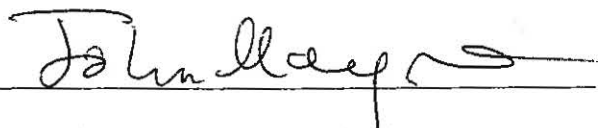
This permit is an NDEQ permit and is being issued pursuant to the December 31, 1997 Delegation Letter from the NDEQ.

Each condition is followed by the source of the authority for said condition.

PERMIT APPROVAL

The granting of a permit to construct a PSD source shall not affect the responsibility of the owner or operator to comply with applicable provisions of the State Implementation Plan (SIP) and any other local, state, or federal requirements. The application is approved and PSD construction permit is granted.

Pursuant to the December 31, 1997 Delegation Letter, signed by the Director of the Department of Environmental Quality, the undersigned hereby executes this document on behalf of the Director of the Department.

Signed: 

John Finlan Mayne (OAQC Officer)

Table A-1

Table A-1: Emission Unit Identification and Description					
Emission Unit Number	Emission Unit Description	Make	Model	Size	Control Equipment
36-01	Slurry Tank T-301	Not Available	Not Available	2500 Gallons	Enclosed
36-02	Defatting Tank T-302	Not Available	Not Available	3370 Gallons	Enclosed
36-03	Defatting Tank T-303	Not Available	Not Available	3370 Gallons	Enclosed
36-04	Screener S-301	Sweco	Not Available	12 GPM	Enclosed
36-05	Screener S-302	Sweco	Not Available	12 GPM	Enclosed
36-06	Fines Settling Tank T-320	Not Available	Not Available	3370 Gallons	Enclosed
36-07	(11) Double Bottom Tubs (DBT-301 through DBT-311)	Not Available	Not Available	3-5 Tubs/Batch	Enclosed
36-08	Low Temperature Vacuum Drying FD-301 and FD-302 and Pans	Not Available	Not Available	156 Pans/Cycle	Enclosed
36-09	IPA Distillation Column DISCOL-301	Not Available	Not Available	468 Gallons/Hr	Enclosed
36-10	Spent IPA Tank T-316	Not Available	Not Available	8000 Gallons	Enclosed
36-11	Virgin IPA Tank T-317	Not Available	Not Available	8000 Gallons	Enclosed
36-12	Recovered IPA Tank T-318	Not Available	Not Available	8000 Gallons	Enclosed
36-13	Boiler Natural Gas fired	Cleaver Brooks	Not Available	8.37 MMbtu/hr	None

Table A-2

Table A-2: Emission Unit Emission Limits and Work Practice Standards				
Emission Unit Number	Pollutant/Parameter	Emission Limit/ Work Practice Standard	Permit Condition	Monitoring Requirements
36-01, 36-02, 36-03, 36-06	Tanks	<ul style="list-style-type: none"> shall be equipped with a lid and permanently attached piping for solvents 	Specific Condition 1.c.	None
36-04, 36-05	Coarse Discharge Points	<ul style="list-style-type: none"> shall be fitted with flexible rubber boots 	Specific Condition 1.d.	None
	Fine Discharge Points	<ul style="list-style-type: none"> shall be fitted with flexible rubber boots 	Specific Condition 1.e.	None
36-07	Tubs (DBT)	<ul style="list-style-type: none"> shall be mobile and be covered as much as possible 	Specific Condition 1.f.	None
36-08	Trays	<ul style="list-style-type: none"> shall be large enough to eliminate cooler storage 	Specific Condition 1.g.	None
	Condensers	<ul style="list-style-type: none"> shall always be functioning properly to capture and recover solvent 	Specific Condition 1.h.	Recordkeeping
36-09	Distillate Column	<ul style="list-style-type: none"> shall be equipped with thermometers, a level alarm and flow alarms 	Specific Condition 1.i.	None
36-10, 36-11, 36-12	Tanks	<ul style="list-style-type: none"> shall be equipped with emergency relief valves and flame arrestors 	Specific Condition 1.j.	None
Building 36	IPA Recovery Rate	<ul style="list-style-type: none"> shall be at least 93% calculated on a 12-month rolling average 	Specific Condition 1.b.	Recordkeeping
	Process Vessels	<ul style="list-style-type: none"> shall have solvent resistant gaskets where possible 	Specific Condition 1.k.	None
	All VOCs	<ul style="list-style-type: none"> All VOC consumed is considered emitted, unless there are records for IPA loss that is not emitted and accounts for recovered material 	Specific Condition 1.l.	Recordkeeping

SPECIFIC CONDITIONS

1. Emission Limits / Work Practice Standards

1.a. [No alternative scenarios are identified in this permit.]

Best Achievable Control Technology (BACT):

- 1.b. The Permittee shall recover and reuse at least 93% of total IPA used at Building 36, calculated on a 12-month rolling average basis. This limit includes periods of startup, shutdown or malfunction (SSM.) [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.c. Emission units 36-01, 36-02, 36-03 and 36-06 shall each be equipped with a lid opening on top and permanently attached piping for the addition of solvent. [Omaha Municipal Code, Section 41-2, Chapter 19.017.02]
- 1.d. The coarse discharge points for emission units 36-04 and 36-05 shall be fitted with flexible rubber boots that will allow emission unit 36-07 to be more effectively covered during the coarse separation tank filling operation. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.e. The fine discharge points for emission units 36-04 and 36-05 shall be fitted with flexible rubber boots that will allow emission unit 36-06 to be more effectively covered during the fine separation tank filling operation. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.f. Emission unit 36-07 shall consist of several tanks that are covered and mobile. The tanks shall separate the solids and IPA/water shall drain to portable receivers in the cooler. The IPA/water shall then be transferred to a pump system and shall be pumped to emission unit 36-10. The tanks shall be covered as much as possible during the filling process and completely during storage in the cooler. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.g. Emission unit 36-08 shall use trays large enough to eliminate the need to store full trays in the cooler before drying. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.h. Emission unit 36-08 shall be equipped with condensers where vapors are condensed and spent solvent is recovered. The condensers shall operate as follows:
- 1.h.i. The condensers shall be properly installed, operated and maintained and shall be operating whenever emission unit 36-08 is in operation;
 - 1.h.ii. All condenser-associated capture and air-handling equipment shall be in good repair and operating properly to allow solvent to be recovered by the condensers.
 - 1.h.iii. The condensers shall be inspected at least once a day. The inspector shall determine and record whether there are any problems related to the condenser; and
 - 1.h.iv. Corrective action shall be taken immediately upon knowledge that either condenser is not operating properly. The permittee shall have routine condenser maintenance items located on-site or available locally to facilitate rapid repair. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]

- 1.i. Emission unit 36-09 shall be totally enclosed and shall be properly operated and maintained in order to recover solvent. The unit shall be equipped with:
 - 1.i.i. Thermometers to monitor the temperature at the top and the bottom of the column that sound an alarm if the bottom temperature drops below the set point;
 - 1.i.ii. Level alarm on the reflux drum that sounds an alarm if readings are over the set points; and
 - 1.i.iii. Flow alarms on the feed and steam streams that will activate an alarm if readings are either over or under the set points. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.j. Emission units 36-10, 36-11 and 36-12 shall be equipped with emergency relief valves and flame arrestors. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.k. Solvent resistant gaskets will be placed on metal to metal contact points (lids) on process vessels where possible to further reduce VOC emissions from enclosed process tanks. The gaskets shall be included in the Plant's preventive maintenance program. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]
- 1.l. VOC emissions shall be calculated as follows: assume that all VOC consumed (as determined by a monthly inventory and purchase records) is emitted, unless the Permittee maintains records of IPA loss pursuant to permit condition 4.a.iii. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 19.017.02]

2. Testing Requirements

- 2.a. Testing requirements are not applicable to any emission units at this source.

3. Monitoring Requirements

- 3.a. The Permittee shall track IPA recovery as provided in Specific Condition 4.a. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 8.004.01]
- 3.b. The Permittee shall monitor process parameters as provided in Specific Condition 4.b. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 8.004.01]
- 3.c. The Permittee shall monitor the condenser operations as provided in Specific Condition 4.c. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 8.004.01]
- 3.d. Excess emissions during period of start-up, shutdown, or malfunctions may not necessarily result in enforcement actions if the Permittee complies with OAQC notification and recordkeeping requirements. This can include notification prior to a planned start-up or shutdown, or submission of records upon receipt of a notice of excess emissions. If a notice of excess emissions is sent to the Permittee, the Permittee may submit information showing that the excess emissions were the result of a malfunction, start-up, or shutdown. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 35]

4. Record Keeping Requirements

4.a. The Permittee shall maintain IPA recovery records for Building 36 on a monthly basis. All recorded values, calculations and supporting documentation shall be available for inspection by the 15th of the month and shall cover the previous calendar month. Recordkeeping shall use the methodology referenced in Appendices A and B. The records shall include the following:

4.a.i. An IPA inventory report consisting of the following information:

- 4.a.i.(1)** The amount of IPA, in gallons of 99.9% IPA, in inventory at the end of the previous calendar month for each of the following emission units: 36-02, 36-03, 36-06, 36-10, 36-11 and 36-12;
- 4.a.i.(2)** The total amount of IPA, in pounds of 99.9% IPA, in inventory at the end of the previous calendar month at Building 36;
- 4.a.i.(3)** The total amount of IPA, in pounds of 99.9% IPA, in inventory at the beginning of the previous calendar month at Building 36;
- 4.a.i.(4)** The total amount of IPA, in pounds of 99.9% IPA, that was added to the inventory (purchased) during the previous calendar month at Building 36; and
- 4.a.i.(5)** The total amount of IPA, in pounds of 99.9% IPA, that was used during the previous calendar month at Building 36.

4.a.ii. An IPA recovery report consisting of the following information:

- 4.a.ii.(1)** The number of batches that was processed during each of the 12 previous calendar months;
- 4.a.ii.(2)** The total amount of IPA, in pounds of 99.9% IPA, in inventory at the beginning of each of the 12 previous calendar months at Building 36;
- 4.a.ii.(3)** The total amount of IPA, in pounds of 99.9% IPA, in inventory at the end of each of the 12 previous calendar months at Building 36;
- 4.a.ii.(4)** The total amount of IPA, in pounds of 99.9% IPA, that was added to the inventory (purchased) during each of the 12 previous calendar months at Building 36;
- 4.a.ii.(5)** The total amount of IPA, in pounds of 99.9% IPA, that was used during each of the 12 previous calendar months at Building 36;
- 4.a.ii.(6)** The total amount of IPA, in pounds of 99.9% IPA, that was added to the batches during each of the 12 previous calendar months at Building 36;
- 4.a.ii.(7)** The IPA recovery, in percent, for each of the previous 12 calendar months;
- 4.a.ii.(8)** The average monthly amount of IPA, in pounds of 99.9% IPA, that was used over the previous 12 month period;
- 4.a.ii.(9)** The average monthly amount of IPA, in pounds of 99.9% IPA, that was added to batches over the previous 12 month period; and
- 4.a.ii.(10)** The average IPA recovery rate, in percent, for the previous rolling 12-month period. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]

- 4.a.iii. The Permittee also may maintain records of IPA loss that is not emitted and may account for the material as recovered. The Permittee may submit this record with the reports described in Specific Conditions 4.a.i. and 4.a.ii. above. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]
- 4.b. The Permittee shall maintain process parameter records for Building 36 on a per batch basis. All recorded values, calculations and supporting documentation shall be available for inspection by the 3rd business day after completion of each batch. The records shall include the information detailed in Appendix C: Parametric Monitoring. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]
- 4.c. A log of condenser maintenance record of problems, per Specific Condition 1.h.iii, shall be maintained and shall be updated when maintenance is conducted on the unit or if emission unit 36-08 is not operating properly. The inspector shall determine and record whether there are any problems related to the condenser that would affect the operation of the condenser. The log shall include any maintenance or repair work and the initials of the person conducting the inspection. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]
- 4.d. All records required herein and support information shall be maintained on site for inspection and shall be retained for a period of five years. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 8.004.02B]

5. Reporting Requirements

- 5.a. The source shall submit the monthly logs required in Specific Condition 4.a. to the OAQC Air Quality Director via e-mail. The logs must be submitted by the 15th of every month for the previous calendar month. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]
- 5.b. The source shall submit a notification via e-mail to the OAQC Air Quality Director for every month that the monthly IPA recapture rate is less than 93%. The notification shall be submitted by the 15th of the following month and shall include a discussion about the factors that contributed to the lower IPA recapture rate. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]
- 5.c. The source shall submit a notification via e-mail to the OAQC Air Quality Director if the monthly IPA recapture rate is less than 93% for 2 consecutive months. The notification shall be submitted within 30 days of the two month period and shall include the following information:
 - 5.c.i. An analysis and discussion of the factors that contributed to the lower IPA recapture rate over the two month period;
 - 5.c.ii. The process parameter records required by Specific Condition 4.b. for the previous three months;
 - 5.c.iii. Any other supporting information that contributed to the analysis and discussion; and
 - 5.c.iv. An action plan that explains what the source will be doing to achieve a higher IPA recapture rate and to ensure that the 12-month rolling average will not violate Specific Condition 1.b. [Omaha Municipal Code, Section 41-2, incorporating NDEQ regulations, Chapter 34.008.03]

Appendix A, B, & C
are in the CBI
files

01/10/12

PAB