

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - REVISION

PERMITTEE

G & K Services, Inc.
Attn: Mr. Jonathan Nedved
5995 Opus Parkway, Suite 500
Minnetonka, Minnesota 55343

<u>Application No.:</u> 96100102	<u>I.D. No.:</u> 031147AAB
<u>Applicant's Designation:</u>	<u>Date Received:</u> March 31, 2011
<u>Subject:</u> Industrial Laundering	
<u>Date Issued:</u>	<u>Expiration Date:</u> November 7, 2013
<u>Location:</u> 8201 South Cork Avenue, Justice, Cook County, 60458	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of a natural gas-fired boiler, two (2) natural gas-fired hot water heaters, a replacement natural gas-fired steam tunnel, five (5) solvent recovery units with condensers, two (2) industrial washing machines, four (4) natural gas-fired dryers with filters, and twelve (12) natural gas-fired space heaters pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons per year of volatile organic material (VOM), 10 tons/year for a single hazardous air pollutant (HAP) and 25 tons per year for combination of such HAPs)). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b) the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 3a. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 215 Subpart G shall only apply to photochemically reactive material.
- b. Pursuant to 35 Ill. Adm. Code 218.302(b), emissions of organic material in excess of those permitted by 35 Ill. Adm. Code 218.301 are allowable if such emissions are controlled by a vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere.
- c. Pursuant to 35 Ill. Adm. Code 218.986, every owner or operator of an emission unit subject to 35 Ill. Adm. Code 218 Subpart TT shall comply with the requirements of 35 Ill. Adm. Code 218.986(a), (b), (c), (d), or (e) below.
 - i. Emission capture and control equipment which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit.
 - ii. Any leaks from components subject to the control requirements of 35 Ill. Adm. Code 218 Subpart TT shall repair any component from which a leak of VOL can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found, unless the leaking component cannot be repaired until the next process unit shutdown, in which case the leaking component must be repaired before the unit is restarted.
- 4. Pursuant to 35 Ill. Adm. Code 218.980(d), no limits under 35 Ill. Adm. Code 218 Subpart TT shall apply to emission units with emissions of VOM

to the atmosphere less than or equal to 2.3 Mg (2.5 tons) per calendar year if the total emissions from such emission units not complying with 35 Ill. Adm. Code 219.986 does not exceed 4.5 Mg (5.0 tons) per calendar year.

- 5a. The condensers associated with the solvent recovery units shall be in operation at all times when the solvent recovery units are in operation and emitting air contaminants.
 - b. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
 - c. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the equipment covered under this permit such that the equipment be kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
- 6a. Volatile Organic Material (VOM) emissions and operation of the industrial laundering facility for Inker and shop towels shall not exceed the following limits:

<u>Towel</u>	<u>Emission Factor</u> <u>(lb/1000 lb)</u>	<u>VOM Emissions</u>	
		<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Inkers	19.7		
Shops	25.0	--	--
	Total:	3.09	24.70

These limits are based on the maximum production rate, inker towel emissions being calculated using an emission factor that was determined by mass balance, shop towel emissions being calculated using an emission factor that was determined by test at similar facility. VOM emissions shall be calculated as follows:

$$E = \sum(T_{Ii} \times F_{Ii}) + \sum(T_{Sj} \times F_{Sj})$$

Where:

E = VOM emissions (lbs);

T_{Ii} = Weight of Inker Towels Processed (lbs);

F_{Ii} = Emission Factor for Inker Towels (lb/1000 lb);

T_{Sj} = Weight of Shop Towels Processed (lbs); and

F_{Sj} = Emission Factor for Shop Towels (lb/1000 lb).

- b. Particulate Matter(PM) emissions and operation of the industrial laundering facility shall not exceed the following limits:

<u>Product</u>	<u>Emission Factor</u> (lb/lb Product)	<u>PM Emissions</u>	
		<u>(Tons/month)</u>	<u>(Tons/Yr)</u>
Shop Towels	0.001		
Mats	0.0002		
Dust Mops	0.0019		
Print Towels	0.0008		
Other Towels	0.0003		
Garments	0.0003		
	Total:	<u>3.75</u>	<u>30.00</u>

These limits are based on the maximum production rate and stack testing at a similar facility. PM emissions shall be calculated as follows:

$$E = \sum(T_{Si} \times F_{Si}) + \sum(T_{Mj} \times F_{Mj}) + \sum(T_{Dk} \times F_{Dk}) + \sum(T_{Pm} \times F_{Pm}) + \sum(T_{On} \times F_{On}) + \sum(T_{Go} \times F_{Go})$$

Where:

E = VOM or HAP emissions (lbs);

T_{Sj} = Weight of Shop Towels Processed (lbs);

F_{Sj} = Emission Factor for Shop Towels (lb/lb Product);

T_{Mj} = Weight of Mats Processed (lbs);

F_{Mj} = Emission Factor for Mats (lb/lb Product);

T_{Dk} = Weight of Dust Mops Processed (lbs);

F_{Dk} = Emission Factor for Dust Mops (lb/lb Product);

T_{Pm} = Weight of Print Towels Processed (lbs);

F_{Pm} = Emission Factor for Print Towels (lb/lb Product);

T_{On} = Weight of Other Towels Processed (lbs);

F_{On} = Emission Factor for Other Towels (lb/lb Product);

T_{Go} = Weight of Garments Processed (lbs); and

F_{Go} = Emission Factor for Garments (lb/lb Product).

c. Operation and emissions from the boiler, two hot water heaters, steam tunnel, dryers, space heaters, and all natural gas combustion equipment(combined) shall not exceed the following limits:

i. Natural Gas Usage: 10.5 mmscf/month, 105 mmscf/year.

ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor</u> (lbs/mmscf)	<u>Emissions</u>	
		(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	84	0.44	4.4
Nitrogen Oxides (NO _x)	100.0	0.53	5.25
Particulate Matter (PM)	7.6	0.04	0.4
Sulfur Dioxide (SO ₂)	0.6	0.01	0.03
Volatile Organic Material (VOM)	5.5	0.03	0.29

These limits are based on the maximum fuel usage and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- d. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hour) to exceed 200 ppm, corrected to 50 percent excess air, pursuant to 35 Ill. Adm. Code 216.121.
- e. The boiler, hot water heaters, steam tunnel, dryers, and space heaters shall only be operated with natural gas as the fuel. The use of any other fuel for any equipment at the source requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- f. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.9 tons/month and 9.0 tons/year of any single HAP and 2.25 tons/month and 22.5 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
- g. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 7a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
 - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA

Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
 - b. Testing required by Conditions 8 and 9 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
8. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
 9. Pursuant to 35 Ill. Adm. Code 218.988, when in the opinion of the Illinois EPA it is necessary to conduct testing to demonstrate compliance with 35 Ill. Adm. Code 218.986, the owner or operator of a VOM emission unit subject to the requirements of 35 Ill. Adm. Code 218 Subpart TT shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105.
 10. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability

status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

11. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 12a. Pursuant to 35 Ill. Adm. Code 218.986(e)(2), for any leak which cannot be readily repaired within one hour after detection, the following records, as set forth below in 35 Ill. Adm. Code 218.986(e)(2), shall be kept. These records shall be maintained by the owner or operator for a minimum of two years after the date on which they are made. Copies of the records shall be made available to the Illinois EPA or USEPA upon verbal or written request.
 - i. The name and identification of the leaking component;
 - ii. The date and time the leak is detected;
 - iii. The action taken to repair the leak; and
 - iv. The date and time the leak is repaired.
- b. Pursuant to 35 Ill. Adm. Code 218.991(a)(2), any owner or operator of a VOM emission unit which is subject to the requirements of 35 Ill. Adm. Code 218 Subpart PP, QQ, RR or TT and complying by the use of emission capture and control equipment shall collect and record all of the following information each day and maintain the information at the source for a period of three years:
 - i. Control device monitoring data;
 - ii. A log of operating time for the capture system, control device, monitoring equipment and the associated emission source;
 - iii. A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- 13a. The Permittee shall maintain monthly records of the following items:

- i. Records addressing use of good operating practices for the dryer filters and the condensers associated with the solvent recovery units:
 - A. Records for periodic inspection of the dryer filters and the condensers associated with the solvent recovery units with date, individual performing the inspection, and nature of inspection; and
 - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - ii. Soiled Shop and Inker towels processed (lbs/month and lbs/year, each); and
 - iii. Natural gas usage (mmscf/month and mmscf/year); and
 - iii. Weight for each type of item cleaned (i.e., shop towels, mats, dust mops, print towels, other towels, and garments), (tons/month and tons/year); and
 - iv. Monthly and annual PM, CO, NO_x, SO₂, VOM and HAP emissions from the source, with supporting calculations (tons/month and year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
14. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 15a. Pursuant to 35 Ill. Adm. Code 218.990, upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 Ill. Adm. Code 218 Subparts PP, QQ, RR, TT or 35 Ill. Adm. Code 218.208(b) shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements.
- b. Pursuant to 35 Ill. Adm. Code 218.991(a)(3), any owner or operator of a VOM emission unit which is subject to the requirements of 35 Ill. Adm. Code 218 Subpart PP, QQ, RR or TT and complying by the use of emission capture and control equipment shall notify the Illinois EPA:

- i. Of any violation of the requirements of 35 Ill. Adm. Code 218 Subpart PP, QQ, RR or TT by sending a copy of any record showing a violation to the Illinois EPA within 30 days following the occurrence of the violation;
 - ii. At least 30 calendar days before changing the method of compliance with 35 Ill. Adm. Code 218 Subpart PP or TT from the use of capture systems and control devices to the use of complying coatings, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.991(a)(1) above. Upon changing the method of compliance with 35 Ill. Adm. Code 218 Subpart PP or TT from the use of capture systems and control devices to the use of complying coatings, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.991(b).
- 16a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, a description of the exceedances or deviation, and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this, please call Randy Solomon at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

Page 9

ECB:RBS:

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the industrial laundering source operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is handling 1106 tons of towels a year. The resulting maximum emissions are below the levels (e.g., 100 tons per year of VOM, 10 tons per year of a single HAP and 25 tons per year for any combination of such HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	<u>EMISSIONS (Tons/Year)</u>					Single <u>HAP</u>	Total <u>HAPs</u>
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>		
Industrial Laundering			30.0		24.70		
Fuel Combustion	<u>4.4</u>	<u>5.25</u>	<u>0.4</u>	<u>0.03</u>	<u>0.29</u>	<u>--</u>	<u>--</u>
Totals	4.4	5.25	30.4	0.03	24.99	9.0	22.5