Langman, Michael

From: Brian F Duffy <BDuffy01@gkservices.com>
Sent: Thursday, December 19, 2013 1:11 PM
To: Langman, Michael
Cc: Douglas L Krysiak; Andrew Utrie; Lee Joniaux; George Hoyos; Gene Bagot; Dennis A Reynolds; Timothy R Stuewer; Stephen J Botts; Sara Ethier; dseitz@trcsolutions.com; Karl Eberhart
Subject: G&K Services - Green Bay Facility - Part 49 Construction Permit - Proposed Dryer Heat Exchangers Project Summary

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Michael:

As discussed recently, G&K Services, Inc.'s Green Bay facility is evaluating potential physical and operational changes that will result in a reduction in energy consumption along with a decrease in emissions from the combustion of natural gas. The facility is proposing to install a heat recycling system (heat exchanger) on each of the four large industrial laundry dryers currently located on-site. These dryers have MMBTU/hr ratings ranging from 2.75 MMBTU/hr to 3.50 MMBTU/hr. These heat recycling systems if installed would also be utilized with the proposed replacement dryers.

The proposed heat exchangers would be installed either indoors (if space allows) or on the roof and incorporated as an integral part of the existing dryer exhaust stacks. Existing stack heights would remain the same or be increased. Stack diameters would remain the same or would be decreased. Stack locations would be relocated within a 10 to 15 foot radius of the existing vertical discharge points to accommodate the physical installation of the heat recycling system. Stack exit temperatures would be lowered approximately from 150-170 ^{0}F to 100-120^{0}F. There would be no modifications to the actual dryers themselves and/or their respective burner systems.

The operation of the proposed heat exchanger systems would be as follows. A heat exchanger receives hot exhaust air from the dryer. The hot exhaust air passes through one side of a heat reclaim wheel inside the exhaust chamber and then continues through the exhaust duct. As the heat wheel revolves on its shaft and into the adjoining chamber, the intake air flow is ducted through the heat wheel on the intake side, allowing the incoming air to gain temperature prior to the dryer's normal heating source. Periodically, during the drying cycle, the system would initiate a self-cleaning air-blast cycle to clear lint buildup on the heat wheel.

With the installation of heat exchangers, it is projected that the usage of natural gas in the dryers on an annualized basis would be reduced by at least 25 percent. This reduction in usage would result in a decrease in the emissions of criteria pollutants and green-house gases from the combustion of natural gas. In addition, with the operation of the heat exchangers, there would be a further reduction in the particulate matter in the exhaust air coming from the dryer's lint collector as there is a corresponding build-up of particulate matter (lint) on the heat wheel. This build-up would be removed by an air-blast cycle during the drying cycle. Most of the build-up falls to the bottom of the heat exchanger housing and is cleaned out on a weekly (minimum) basis. Overall PM emissions should be less than before without the heat exchangers.

It is G&K's understanding that this proposed physical and operational change to the dryers will not increase either the allowable or actual emissions of an existing air contaminant and will not result in the emissions of

an air contaminant not previously identified or emitted, and therefore is not classified as a modification as defined under 40 CFR 49.152.

In summary, G&K believes that this proposed physical and operational change does not constitute a modification to the dryers, thereby necessitating additional permitting; and is not subject to any other emission limits as a new, modified or reconstructed source. We do request that EPA affirm and advise us if our interpretations of the respective regulations are correct.

Please call me with any questions or need for additional information in respect to this correspondence.

Thank you for your assistance with this matter. Have a good holiday.

Brian

Brian Duffy
Environmental Engineer
Environmental
G&K Services
5995 Opus Parkway
Minnetonka, MN 55343
Phone: 952-912-5713
Fax: 952-912-5925
www.gkservices.com

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