ENVIROCO MANAGEMENT

ENVIRONMENTAL CONSULTANTS

Ms Elizabeth Lacey
Licensing Unit
Office of Licensing & Resources
EPA Headquarters
PO Box 3000
Johnstown Castle Estate
County Wexford

26th November 2007

RE: KMK Metals Recycling Ltd. (W0113-03)
Further Information as verbally requested by Marian Doyle

Dear Ms Doyle,

In response to your recent further information requests to Charlotte Walker of KMK Metals, I wish to supply the following (1 original and 2 copies):

1. A site layout plan as requested with the entire application site boundary marked by a red line.

2. A copy of the emissions monitoring report of the Cathode Ray Tube (CRT) plant. This monitoring was carried out in 20th September 2006 but was not reported until 29th January 2007. The report is therefore scheduled for the 2007 AER. However, for the purpose of this waste licence review application, it is included as an attached document. There were no abnormal or nuisance emissions (noise and dust) from the operation of the CRT plant.

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Yours Sincerely,

Niall Nally

Niall Nally
Senior Environmental Consultant
cc. Kurt M Kyck, KMK Metals Ltd, Cappincur Industrial Estate, Tullamore, Co Offaly.

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Confidential Report

Customer: KMK Metals Recycling Ltd,
Tullamore,
Co Offaly,

Customer Ref:

F.T.A.O.: Charlotte Walker

TMS Environment Ref: 10717

Order No.	Commencement Date: 20/09/2006	Completion Date: 29/01/2007

Report title: Survey of emissions to atmosphere at KMK Metals Recycling, Tullamore, Co Offaly

Report by: Mary Walsh Stephen Byrne Avril Collier

Approved by: Imelda Shanahan
Dr. Imelda Shanahan
Technical Manager

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2. This report relates only to the items tested
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1.0 Scope

This report deals with results of a survey of dust and noise emissions to atmosphere from the KMK Metals Recycling, Tullamore, Co Offaly.

2.0 Methodology

The survey was completed by TMS Environment Ltd personnel during a site visit on 20th September 2006. Emissions from the vent within the CRT plant were monitored. Temperature and velocity were measured *in situ* using a thermocouple, pitot tube and manometer. Particulates were sampled isokinetically and measured gravimetrically. The metal content of the particulates was determined by ICP-AES analysis. All samples were collected over 30 minute sampling intervals.

An environmental noise survey was also carried out following a request from the EPA in order to monitor noise levels being emitted during the operation of the CRT vent extract.

The noise survey was carried out in accordance with the requirements of *ISO 1996: Acoustics - Description and Measurement of Environmental Noise* and in addition, with reference to the 2003 EPA publication, *"Environmental Noise Survey, Guidance Document"*. The measurements were made Noise measurements were made using a Bruel & Kjaer 2260 integrating sound level meter fitted with 1:1 and 1:3 Octave Band Filters. The instrument was calibrated *in situ* at 94 dB(A) prior to and after use. This instrument is a Type 1 instrument in accordance with IEC 651 regulations. The Time Weighting used was Fast and the Frequency Weighting was A-weighted as per IEC 651.

In order to determine if the operation of the fan would cause a disturbance to the surrounding environment an assessment of the predicted noise levels at various distances from the noise source was conducted using the method outlined in *ISO 9613: Acoustics – Attenuation of sound outdoors, Part 2: General method of calculation, 1996.* This calculation is as follows:

$$L_{p2} = L_{p1} - 20\log(r2/r1)$$

Where L_{p2} = sound pressure level in dB at distance r2 in meters

And L_{p1} = sound pressure level in dB at distance r1 in meters

3.0 Monitoring Results

The results of the emissions monitoring survey are presented in Table 1 below.
The results of the noise monitoring survey are presented in Table 2 below.

Table 1 Emissions to atmosphere at KMK Metals Recycling, Co Offaly.

Emission Source	CRT Stack	
Measured Emissions		
Temperature, °C	29.0	
Velocity, m/sec	10.5	
Flow Rate, Nm^3/hr	957	
Parameter	**Concentration mg/Nm^3**	**Mass Emission Rate, kg/hr**
Lead	0.01	7.1×10^{-5}
Phosphorus	0.07	1.1×10^{-5}
Particulates	5.90	5.6×10^{-3}

Table 2 Noise monitoring results

Distance from noise source (m)	**L_{Aeq} recorded dB(A)**	**Predicted L_{Aeq} dB(A)**
10	71	-
20	66	66
40	59	58
60	NR	54

NR = Not recorded

4.0 Evaluation of Results

The results presented in table 1 indicate that a low level of dust is emitted through the extraction vent from the CRT plant, with trace levels of phosphorous and lead present.

The results of the noise survey indicate that levels recorded on site at a number of distances from the vent conform with predicted noise levels based on the model used. It is predicted that at a distance of 60m from the noise source the noise level would be reduced to 54dB(A) which would be below the recommended daytime limit value generally set by the EPA with reference to licensed facilities. It is therefore suggested that noise emitted from the operation of the vent from the CRT plant does not cause a disturbance to the receiving environment, as there are no sensitive locations within a 100m distance of the noise source.

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job. KMK METALS RECYCLING | job no. 06-055

title. EXISTING SITE LAYOUT | drawing number. SL-02

scale. 1:1000 | date. NOV. 2007 | drawn. T.C. | rev. | file.

NOTES:

LEVELS RELATE TO TEMPORARY BENCH MARK OF 48.73M ON FLOOR LEVEL OF EXISTING WAREHOUSE