



AEROSOL MONITORING CERTIFICATE OF ANALYSIS



CLIENT CHRIS THOMPSON – TFL - HMPS TEST DATE 15/02/19

ADDRESS 7TH FLOOR, 5 ENDEAVOUR SQUARE, PAGE No 1 OF 3
STRATFORD, LONDON, E20 1JN JOB No 183284

SITE/LOCATION WEST RUISLIP TRAIN DRIVERS MESS/ CERTIFICATE No. C183284/150219/01
CRANSTON CLOSE GARAGES/ FLATS

PROCESS BEING MONITORED AM CLOSE TO DIESEL LOCOMOTIVE IDLING AND MOVEMENTS

SAMPLES STATIC ANALYST (S) JK

ANALYSIS LOCATION BALANCE ROOM, MAIN LABORATORY NO. OF SAMPLES Three + blanks

TEST PROCEDURES

TEST METHOD CARRIED OUT IN ACCORDANCE WITH MDHS 14/4 AND IN-HOUSE TEST PROCEDURE 4R-E206. SAMPLING STRATEGY CARRIED OUT IN GENERAL ACCORDANCE WITH HSG 173 MONITORING STRATEGIES FOR TOXIC SUBSTANCES.

TWA: 8-HOUR TIME WEIGHTED AVERAGE

FILTER NUMBER	SAMPLE TYPE *	SAMPLE LOCATION	START TIME	BREAKS IN SAMPLING (IF APPLICABLE)		FINISH TIME	FLOW RATE / (l/min)	VOLUME OF AIR / (litres)	CALC. DUST CONC ^N / (mg/m ³)	TWA: / (mg/m ³)
				TIME OFF	TIME ON					
180092/169	R	Cranston Close Garage / Parking	07:41	-	-	09:57	2.2	286.31	0.10	-
180092/170	R	Drivers Mess Room, Corridor	07:41	-	-	10:07	2.2	307.36	0.07	-
180092/171	R	Overbridge Access to Drivers Mess Room	07:41	-	-	10:07	2.2	307.36	0.09	-

* RESPIRABLE: R, THORACIC: T, INHALABLE: I

TEMPERATURE: -1 °C

PRESSURE: 1027.0 MILLIBARS

UNCERTAINTY OF MEASUREMENT

THE LOWER LIMIT OF DETECTION IS CALCULATED TO BE 0.02MG. THE OVERALL ACCURACY OF MEASUREMENT IS DEPENDANT ON THE SAMPLING VOLUME: THE GREATER THE SAMPLING VOLUME, THE LOWER THE LIMIT OF ACCURATE MEASUREMENT.

HSE WORKPLACE EXPOSURE LIMIT (EH40/05): RESPIRABLE DUST : **4 MG/M³ (8-HOUR TWA)**
INHALABLE DUST: **10 MG/M³ (8-HOUR TWA)**

SAMPLES TAKEN ARE HELD IN THE MAIN LABORATORY AND WILL BE DISPOSED OF AFTER A MINIMUM PERIOD OF SIX MONTHS.

CERTIFICATE PREPARED BY [REDACTED]

GRAVIMETRIC ANALYSIS CARRIED OUT BY: [REDACTED]

CERTIFIED BY [REDACTED]

SIGNED [REDACTED]

SIGNED [REDACTED]

SIGNED [REDACTED]

ISSUE DATE 26/02/19

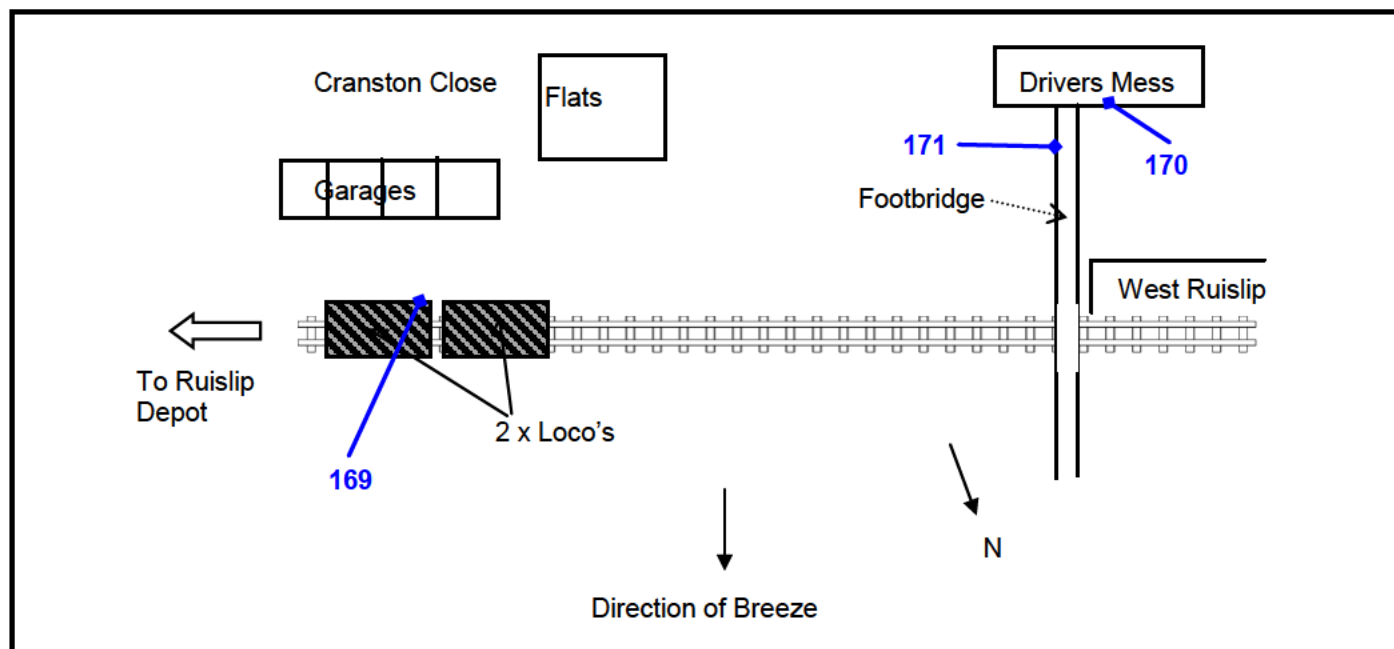
Head Office: Unit 3, Metro Centre, Britannia Way, London, NW10 7PA
Laboratory: Unit 11, Ironbridge Close, Great Central Way, London, NW10 0UF
T: +44(0)20 8955 9680 F: +44(0)20 8955 9689 E-mail: enquiries@4-rail.com
VAT Registration Number: 691 5975 82 Company Registration No.: 3256863

FILTER NUMBER	HEAD/ PUMP NO.	START FLOW RATE / (l/min)	START TIME	FINAL FLOW RATE / (l/min)	FINISH TIME	FLOW RATE CHECK / (l/min)	TIME	FLOW RATE CHECK / (l/min)	TIME	FLOW RATE CHECK / (l/min)	TIME	FLOW RATE CHECK / (l/min)	TIME
180092/169	4RS 63 441147	2.2	07:41	2.2	09:57	-	-	-	-	-	-	-	-
180092/170	4RS 58 441163	2.2	07:41	2.2	10:07	-	-	-	-	-	-	-	-
180092/171	4RS 59 410819	2.2	07:41	2.2	10:07	-	-	-	-	-	-	-	-

ENVIRONMENTAL CONDITIONS

START TEMPERATURE	-2°C	START PRESSURE	1027.0	MILLIBARS			
FINAL TEMPERATURE	0°C	FINAL PRESSURE	1027.0	MILLIBARS			
BALANCE		CALIBRATION		TIME KEEPING		CALIBRATION	
SERIAL NO.	<u>L40355</u>	DUE DATE	<u>JUNE 2019</u>	EQUIPMENT	<u>460029</u>	DUE DATE	<u>25/06/19</u>
FLOWMETER		CALIBRATION		TEMPERATURE		CALIBRATION	
REF. NO.	402819	DUE DATE	05/03/19	GAUGE. NO.	410787	DUE DATE	30/07/19

SITE DIAGRAM



REMARKS/OBSERVATIONS

THE OPINIONS AND INTERPRETATIONS EXPRESSED HEREIN ARE OUTSIDE THE SCOPE OF THE UKAS ACCREDITATION

AIR VELOCITY, IF REQUIRED : METRES PER SECOND

AIR DIRECTION, IF REQUIRED :

DURING SAMPLING

07:30 – ARRIVED AT WEST RUISLIP STATION, WALKED TO DRIVERS' MESS ROOM, INSTALLED PUMP IN CORRIDOR AND ON FOOTBRIDGE

07:41 – SWITCHED PUMPS ON

07:52 – POSITIONED PUMPS AT CRANSTON CLOSE GARAGES.

08:59 – LOCO STARTED ENGINES – (2X LOCOS BOTH STARTED) – MODERATELY SMOKEY.

*CLASS 20 LOCOS (OLD TYPE)

CALM WEATHER – DRY, COLD, SUNNY, VERY LITTLE AIR MOVEMENT, SLIGHT BREEZE TOWARDS NORTH.

09:42 – TRAIN MOVED EAST INTO RUISLIP DEPOT

09:57 – FINISHED SAMPLING AT CRANSTON CLOSE

10:07 – FINISHED SAMPLING AT WEST RUISLIP

DURING GRAVIMETRIC ANALYSIS

NONE NOTED