

**Report of Results: MVA1234**

**Particle Sizing, ABC Energy  
Client Project 4321**

**Prepared for:**

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**14 July 2013**



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#### **INTRODUCTION**

This report includes the results of particle size analysis of two particulate samples on filters delivered to MVA Scientific Consultants on 27 June 2009. Upon receipt, the samples were assigned unique MVA Scientific Consultants laboratory identification numbers as follows shown in Table 1. Analyses were performed at MVA Scientific Consultants during the period of 27 June through 14 July 2013.

#### **METHODS**

Samples were prepared for analysis in accordance with MVA SOP 310: "Sample Preparation Methods for Total Particle Sizing by Automated Scanning Electron Microscopy."

The analyses were performed using a JEOL JSM 6490LV scanning electron microscope operating in automated mode under the control of a ThermoScientific Noran System SIX x-ray analysis system, utilizing MVA SOP 322. The particle size data are presented in terms of particle number and in terms of estimated mass. The assumption has been made that the particles are all of similar density and therefore the particle volume distribution is equivalent to the particle mass distribution.

#### **RESULTS**

The size distributions of the particles down to 0.5 micrometers are shown in Tables 1 and 2.

**Table 1. MVA 1234. ABC Energy Project 4321  
Percentages of Particles in Various Diameter Ranges by  
Number of Particles**

MVA#	T0001	T0002
ABC Energy ID	Run 1 Filter	Run 2 Filter
Diameter Range (µm)		
0.5-<1.0	51.7	44.9
1.0-<2.5	40.5	45.1
2.5-<5.0	7.0	8.9
5.0-<7.5	0.6	0.7
7.5-<10.0	0.1	0.2
≥10.0	0.1	0.3
Total Particles	18015	17913

**Table 2. MVA 1234. ABC Energy Project 4321  
Percentages of Particles in Various Diameter Ranges by  
Estimated Mass of Particles**

MVA#	T0001	T0002
ABC Energy ID	Run 1 Filter	Run 2 Filter
Diameter Range (µm)		
0.5-<1.0	1.8	1.2
1.0-<2.5	10.1	8.1
2.5-<5.0	11.5	10.1
5.0-<7.5	4.4	3.7
7.5-<10.0	1.6	3.6
≥10.0	70.7	73.3