



2008 DUPONT
CEFIC European Responsible Care® Award 2008
APPLICATION FORM

Company Name: Du Pont de Nemours Belgium BVBA

Company/Site Activities:

DuPont is a science-based products and services company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture and food; building and construction; communications; and transportation.

DuPont Belgium, founded in 1958 in Mechelen, counts about 1400 employees. Sites are located in Mechelen, Antwerp, Heusden Zolder, Brussels and Ieper. DuPont Mechelen is the largest manufacturing plant in Belgium. Apart from its 4 production units - Performance Coatings, Engineering Polymers , Vespel parts and shapes and Teflon Finishes - DuPont Mechelen has a European centre for training, marketing, sales, research and development, sourcing & logistics and customer services.

Number of Site Employees : 1250

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Contact Name and title : Karel Vanhoenacker – Environmental Coordinator

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Project title : Reduction of site noise levels by more than 50 %.

Brief Description of project: Noise reduction of more than 50 % due to a 3 year program to remediate noise sources at the DuPont site which aimed at improving the overall noise levels within the community located near to the DuPont fence line.

Project Summary – see page 2

Supporting Documentation: See attachment 1 – Noise Reduction Charts

Project Summary

Measurement of fence line noise in 2000.

Following concerns expressed by the local community regarding noise pollution from the industry located in South Mechelen, including DuPont, Site management decided to take advantage of the opportunity presented by the total shutdown of the Site in the new year period 1999/2000. (This shutdown was related to the Site Y2K Contingency Plan).

We engaged an external, governmental-approved noise measurement company to independently and accurately quantify the noise originating from the Mechelen Site – effectively the fence-line noise levels. Measurements were taken prior to, during, and after the Y2K shutdown in the backyards and gardens of the neighbours who border the Site. The fence-line noise level was quantified at 52 dB (A) on the site fence-line contour. Belgian environmental noise legislation permits “old” sites, such as DuPont Mechelen, (50 years old), to emit noise up to 55 dB (A).

From a legal point of view the site was well within compliance, but recognising that noise could become an issue as one of our neighboring (non-DuPont) plants was forced to remediate because of the nuisance to our neighbors, it was decided, by management, to draw up a draft noise reduction plan.

This was communicated to the site Community Advisory Panel (CAP) and with the Governmental Environmental Agency (LNE).

Define, together with external experts, the most significant noise sources on the site.

With the technical assistance of an independent measurement contractor (A/V), an inventory was made of the most significant noise sources (pumps, coolers, fans, etc.) on the site. This was done by physical measurement of all significant noise sources (approximately 100).

Evaluation of total noise emission

The noise level of all the significant sources was entered into a specially developed mathematical model. This model factored in individual noise source data, climatic and geographical conditions, screening by plants and buildings, etc., and was used to predict noise levels at the fence line.

Reality check

The levels, predicted using the model, were in close correlation to the actual measured levels at the fence-line, substantiating the accuracy of the model and the weighting factors which had been developed in its derivation. This was considered state-of-the-art methodology.

Analyze

By means of Pareto analysis, the sources with the most significant noise impact on our neighbors were identified, and a draft reduction plan was made with the help of another third party specialized in noise source insulation. This reduction plan was fine-tuned and finally resulted in a 3 year action plan for the entire site. The expected noise reductions were calculated and presented to the CAP and LNE. (see images in attachment 2)

Expected impact on the fence line noise was –50%.

Improve

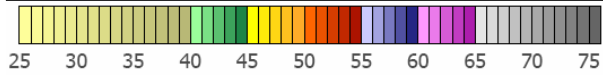
Budgets were approved. “Low hanging fruit” was picked (low cost improvements). Basic and detailed engineering was done.

Control

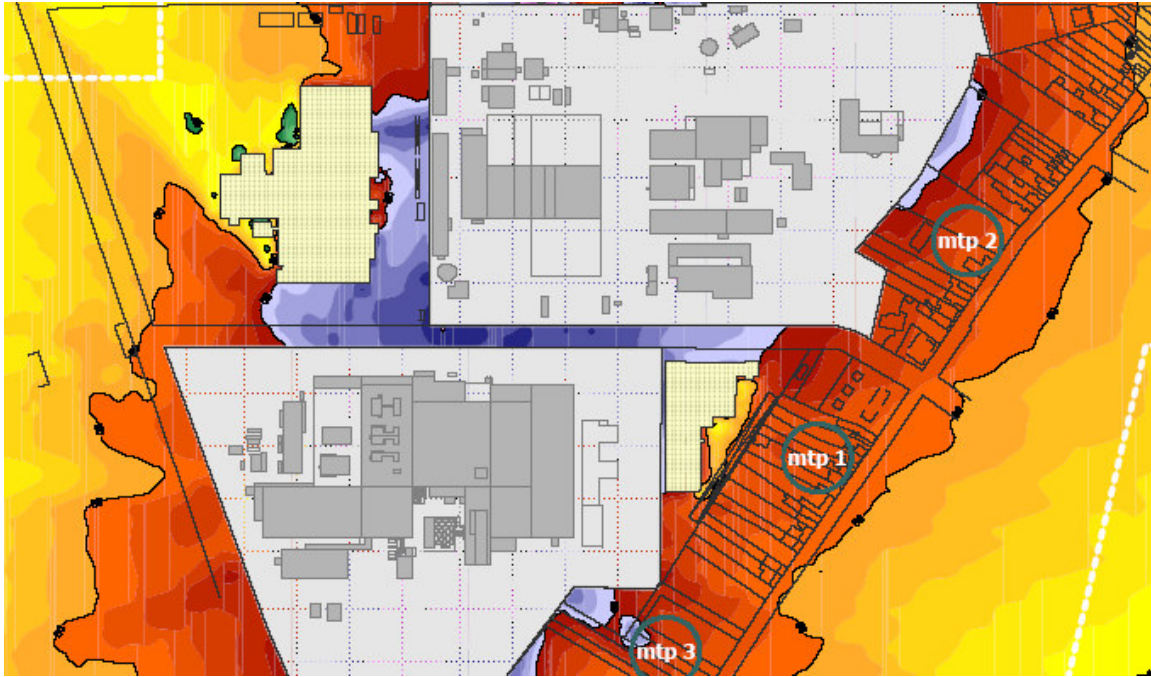
After execution of the 3 year noise reduction plan, verification measurements were done by A/V. (see image in attachment 1). A 50 % reduction was achieved. Results were communicated to the CAP and LNE with good feedback.

Attachment 1 : Noise reduction charts

Calculated Specific Noise level Lsp in dB(A) re. 20μPa



Situation before remediation



Situation after remediation

