

# Technical Working Group for the EMAS Sectoral Reference Document on Best Environmental Management Practices in the Car Manufacturing Sector

Second meeting, Brussels, 29 September 2015

These meeting minutes have been drafted by Ricardo Energy and Environment as an independent consultant under contract to the European Commission, Joint Research Centre and edited by the European Commission's Joint Research Centre.

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Disclaimer: The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.

## 1 Introduction

The European Commission's Joint Research Centre (JRC) is developing a **Sectoral Reference Document (SRD)** on best environmental management practice in the car manufacturing sector. This document will describe best environmental practices that relevant stakeholders can implement in order to minimise their environmental impacts.

The development of this document is part of the European Commission's work to implement the EU Eco-Management and Audit Scheme (EMAS) Regulation. EMAS is a voluntary tool to promote continuous improvements in the environmental performance of organisations across all sectors of economic activity.

The revision of the EMAS Regulation in 2009 (EC No. 1221/2009) introduced a particular focus on environmental performance. To support this aim, the European Commission's Joint Research Centre (JRC) is producing SRDs to provide information and guidance on **best environmental management practices (BEMPs)** in several priority sectors, including the car manufacturing sector. These documents are developed in close collaboration with the stakeholders of the different sectors and under the guidance of a Technical Working Group (TWG) comprising experts from the sector. Further information on the SRDs and their development process can be found in the guidelines on the **"Development of the EMAS Sectoral Reference Documents on Best Environmental Management Practice"**<sup>1</sup>. SRDs are documents that EMAS registered organisations must take into account when assessing their environmental performance, but can also be used by others looking for guidance on how to improve their environmental performance.

A Technical Working Group (TWG) for the car manufacturing sector was established in September 2014 and a kick-off meeting held in Brussels on 20-21 October 2014. The goal of the workshop was to establish the information exchange between the members of the TWG and to assist in steering the development of the document, and namely set its scope and assess the preliminary best environmental management practices identified. The minutes of the meeting are available on-line<sup>2</sup>.

A second TWG meeting, focusing on the car manufacturing processes and facilities, rather than techniques related to recover/disposal of end-of-life vehicles, took place in Brussels on 29th September 2015. The present document summarises the discussions that took place at this second meeting and the related actions agreed.

<sup>1</sup> Available on-line at: <http://susproc.jrc.ec.europa.eu/activities/emas/documents/DevelopmentSRD.pdf>

<sup>2</sup> [http://susproc.jrc.ec.europa.eu/activities/emas/documents/KO\\_BEMP\\_CarManufacturing.pdf](http://susproc.jrc.ec.europa.eu/activities/emas/documents/KO_BEMP_CarManufacturing.pdf)

## 2 Overview of the meeting

### 2.1 Discussions

#### Overview of the context of the meeting

- The JRC explained that the purpose of the meeting was to ensure agreement between key stakeholders on the scope, the updated structure and the way forward for the Car Manufacturing Sectoral Reference Document (SRD), more specifically the section related to car manufacturing processes and facilities.
- Discussions will also cover the proposed new BEMPs in this section.
- The JRC outlined the legal basis for developing the work – i.e. the EU Eco-Management and Audit Scheme (EMAS) Regulation.
  - The EMAS scheme mandates the production of SRDs for some priority sectors.
  - These documents should contain best environmental management practices, environmental performance indicators and benchmarks of excellence.
  - It was reiterated that EMAS is voluntary, and the content of the document can benefit organisations that are not EMAS registered who also wish to improve their environmental performance.

#### Overview of the process

- The JRC outlined the development process and the key milestones. The JRC IPTS is responsible for the technical content of the SRD.
  - In the first phase, desk-based research, interviews and site visits are conducted to form the background study, typically carried out by a contractor (in this instance Ricardo Energy & Environment, previously known as Ricardo-AEA).
  - The background document was shared in October 2014 at the kick-off meeting, where the purpose was to discuss scope, discuss and agree BEMPs and provide inputs. The background report is intended to serve as a basis for discussions with the Technical Working Group (TWG).
  - The current phase is the information exchange, which involves further discussions with stakeholders.
  - The next major step in this stage will be the final meeting, where the objectives are to draw conclusions on environmental performance indicators and benchmarks of excellence on the agreed and developed BEMPs.
  - The work of the TWG will conclude with the production of the Best Practice Report. The purpose of the Best Practice Report is to provide detailed quantitative information that enables organisations to implement the BEMPs.
  - The Best Practice Report forms the basis of the Sectoral Reference Document (SRD) which is the official final text; it is essentially a condensed summary on the principles of each Best Practice (together with Indicators and Benchmarks of Excellence). The SRD is important for EMAS Registered organisations, whereas all other organisations can refer to the best practice report which contains more technical details.

#### Overview of Best Environmental Management Practices (BEMPs)

- The JRC provided a brief reminder of what are considered BEMPs for the benefit of new participants. Key aspects are:
  - BEMPs encompass techniques, measures or actions that can be taken to minimise environmental impacts.
  - BEMPs have already been fully implemented by at least one organisation – this excludes emerging techniques, proof of concepts etc.
  - BEMPs are technically and economically feasible.
  - BEMPs go well beyond common/good practice – they should represent the very best practices in the industry.
- Sébastien (DG ENV) clarified that EMAS registered organisations can choose which BEMPs are to be reported on, based on their key environmental impacts. Organisations are not obliged to implement the BEMP, but only to explain whether and which BEMPs they plan to

implement. This aimed to minimise the administrative burden and allow companies the flexibility to select the most relevant options.

- Tobias (ACEA) requested to see the draft text in order to share with organisations.

## 2.2 Actions

- Draft text developed by DG ENV and JRC related to the use of BEMPs by EMAS organisations to be shared with the TWG.

## 3 Update on progress

### 3.1 Discussions

#### Summary of updates since TWG Kick-off meeting

- The JRC outlined the progress since the TWG Kick-off meeting in October 2014
  - Inputs from stakeholders have been received concerning BEMPs individually
  - The JRC has been discussing with ACEA how to structure the information and the scope of the document
- Evolution of the format of the BEMPs
  - The proposed format follows the structure of that used in the Best Available Technique Reference Documents (BREFs) according to the Industrial Emissions Directive.
  - The description of the BEMPs requires detailed technical information.
  - The JRC noted that in principle they do not object to changing the structure as long as all of the required elements are represented
  - The different situation across different facilities should be reflected in the applicability of each BEMP. In particular the technical boundaries of each BEMP should be thoroughly explained when feasible.
  - Tobias (ACEA) stressed that the economic aspects are very important and the document should reflect these by putting the section in a prominent position. Even if there is no quantitative information available, this aspect should still be described.
  - It was agreed that the ordering of the sections is not a concern, only the importance given to the section on economics.
- Environmental benefits:
  - Tobias (ACEA) queried the description of the section on environmental benefits as “potential or achieved”
  - Paolo (JRC) clarified that this was intended to provide more flexibility and the text should be based as much as possible on what has actually been achieved. The 'potential' benefits could be for organisations that have not yet implemented the BEMP.

#### BEMP document structure revision

- The focus on the car manufacturing should be restructured according to maintenance groups / plant functions so that it is as approachable as possible to practitioners
- There is now a clarification of the target stakeholders for each BEMP and/or groups of BEMPs.
  - A matrix identifying which families/categories of BEMPs should be considered/prioritised by which stakeholders has been developed
- The industry emphasised the importance of ensuring technology neutrality.
  - If a BEMP focusses on technical measures, it should allow a range of solutions that addresses a specific function in the plant rather than being too narrowly focussed on a single technology.
- Environmental performance indicators should be practical and at process level
  - Tobias (ACEA) noted the need to avoid indicators/metrics that identify specific data, since the comparability between plants is limited.

- The JRC acknowledged that this difficulty would affect the definition of benchmarks of excellence, which may need to be more qualitative.
- Benchmarks of excellence should be technologically neutral and general enough to take into account the variety of specific situations.
- Ricardo Energy & Environment raised the issue of trade-offs, such as higher energy in manufacturing that may be more than offset in other lifecycle stages. Although this is reflected in the lifecycle approach BEMP, such considerations should be reflected in the text of other BEMPs where relevant.

## 3.2 Actions

- It was agreed that the ordering of the sections within each BEMP does not need to be changed (i.e. no need to change the order of “economics” and “applicability”) - only that the economics section is given sufficient attention.
- It was agreed that the definition of benchmarks of excellence should be discussed for each BEMP in order to decide on what level of detail is appropriate; this will be a focus of the final TWG meeting.

# 4 Proposals for BEMPs: revised outline and scope

## 4.1 Discussions

### Best Practice report - proposed outline and target groups

- The JRC provided an overview of the proposed revised list of BEMPs and explained that the matrix indicates which stakeholders are concerned at each stage.
  - The BEMP proposals already in the background report were indicated in a second table, showing that some are already covered but others still lack information.
  - Tobias (ACEA) explained that biodiversity is typically based on decisions made at headquarters and would not be relevant for many managers at local level.
  - Sebastien (DG ENV) explained that biodiversity is one of the key indicators of EMAS.
  - The JRC clarified that if biodiversity is a key concern in a particular area, it is relevant to have BEMPs that cover it – whereas if biodiversity is not a concern they can choose to ignore those BEMPs.
- The JRC showed an example of the overview table from the background document and suggested that an additional line could be added to make very clear which stakeholders are concerned.
  - Simone (Fiat Chrysler) indicated that “management” in the table may be misleading as an area, and it could be changed to “overarching”
  - Sebastien (DG ENV) suggested that “vehicle manufacturing” could be changed to “vehicle production” to make it clearer
  - Ricardo Energy & Environment indicated that Tier 1/2 suppliers may need to be included in certain manufacturing elements

### Discussion of revised list of proposed BEMPs

- The JRC presented a preliminary table showing the BEMP proposals.
- Tobias (ACEA) suggested that the most relevant aspects of the paint shop are already covered by the relevant BREF. Nevertheless, the SRDs should acknowledge the importance of the BREFs and also to quote them in the text.
- Discussion of the separate BEMP on trim – this may not be a separate process and should be included in assembly
- Engine & gearbox assembly could be covered separately; N.B. in both cases “... assembly” should be used instead of “production”.
- BEMPs on component manufacturing (cross-cutting) – agreed that it makes sense to separate this out.
- BEMPs on specific component manufacturing – noted that the processes are very different e.g. for metal / plastic components. Trying to look in detail at all of the components could become unmanageable – hence it was suggested to have a single chapter that gives

examples of different manufacturing processes. It may be possible that defining KPIs for different components would be helpful.

- BEMP on assembly – Simone (Fiat Chrysler) explained that there were constraints such as trade-offs between health & safety (which is the primary focus) vs energy.
- Vehicle weight was discussed – this is very dependent on the market and other issues such as safety. It would not be appropriate to have a separate BEMP on this, but it could be incorporated into one of the other cross-cutting BEMPs (considering a lifecycle perspective, supply chain management); however, this is already being done.
- Inclusion of a BEMP on testing was discussed – Ricardo Energy & Environment and Tobias (ACEA) agreed that the impact in manufacturing was very small and there was little value in covering this phase, rather to focus on testing post production.

## 4.2 Actions

- JRC to review the terms used in the stakeholder/environmental aspect table to ensure it is clear – i.e. “management” is not a lifecycle phase.
- Tier 1 to be considered as targets for vehicle manufacturing BEMPs
- It was agreed that all of the key aspects of the paint shop were included in the BREF, but a reference to this document should be made in the car manufacturing BEMP
- Concerning the biodiversity BEMPs, the applicability should be clearly explained (i.e. decisions may be made at head office level, or it may not be relevant for a particular site). The BEMP on green roofs could be included under biodiversity measures.
- It was agreed that including a BEMP on testing (pre-manufacturing stages) was not needed.
- Amendments to the list of BEMPs to consider:
  - Investigate BEMPs on engine & gearbox assembly
  - BEMPs on specific component manufacturing - it may be possible that defining specific KPIs for different components would be helpful
  - Including discussion of lightweighting (and other product-related improvements) only in the context of cross-cutting BEMPs such as lifecycle perspective / supply chain management.
  - Including BEMP on trim as part of assembly
  - Component manufacturing should take into account both new and aftermarket

## 5 Interaction with Fabricated Metal Products SRD

### 5.1 Discussions

#### Fabricated Metal Products (FMP)

- The JRC presented the proposed (preliminary) BEMPs for the Fabricated Metal Products SRD and explained that it is earlier in the process of development compared to the car manufacturing SRD.
- Objective of the discussion today is to delineate the more general (metal-forming, etc.) processes from those that are specific to the automotive industry. It may be appropriate to deal with certain aspects in the FMP document only. Alternatively, there may be practices on top of what is included in FMP that are important for the automotive industry
- Tobias (ACEA) noted that the FMP would be the right place for most general metal-related BEMPs. The exact boundaries are difficult to determine but essentially the parts that are manufactured on-site would be considered the primary responsibility for the automotive sector.
- It is difficult to really understand the relevance of the BEMPs listed in the FMP SRD on the basis of the titles alone.
- Welding is a key process for automotive and could be investigated further than in the FMP sector.

## 5.2 Actions

- Agreed that the JRC will share a short description of each of the FMP BEMPs to allow the TWG to deliberate on the relevance of the topics.
- Consider whether coverage of welding would be appropriate (in either FMP or car manufacturing document – to be confirmed).
- Inputs for both SRDs (FMP and car), will be collected and treated in order to better understand where each information/example etc. could be best placed.

## 6 Manufacturing BEMPs to be further developed

### 6.1 Discussions

- The JRC presented the BEMP proposals for the car manufacturing and asked for views on which should be progressed and/or which could be eliminated
- Alternative energy:
  - Tobias (ACEA) questioned whether the BEMP on alternative energy was relevant, since there are many constraints on manufacturers.
  - The JRC clarified that this BEMP was typically included and it is clear that it is not applicable to all sites.
- Cross-cutting BEMPs for each area:
  - Tobias (ACEA) questioned whether including a cross-cutting BEMP for each area would be needed.
  - The JRC clarified that the cross-cutting BEMPs would include general techniques at a higher level that do not fit into the different sub-areas. It may be that they could be removed if there is no relevant/specific information – this will be reviewed as the report develops.
- New BEMP proposals (production/manufacturing)
  - The discussion turned to the difficulty of identifying best practices across the industry and even internally – it is extremely hard to identify ideas that have an impact and it should not be expected that there will be a lot of BEMPs in these areas (e.g. engine assembly).
  - Developing a template and requesting specific KPI may facilitate inputs from members in order to find BEMPs.
  - JRC clarified that receiving good practices from industry is an important starting point, whereas consolidating the material and developing the full BEMP would be up to the JRC.
- In case companies do not feel comfortable to share data, it could be anonymised.
- ACEA could consolidate information from the industry in order to ensure members understand and trust the process.
- The Commission requested experts to liaise directly with them if possible.
- Simone (Fiat Chrysler) suggested to keep the ACEA proposal to separate emissions to air and emissions to water
- Frederic suggested that CLEPA also be included in the data collection

### 6.2 Actions

- ACEA volunteered to coordinate efforts among members to come up with various examples based on technological improvements that they are already undertaking, and/or “lighthouse” projects.
  - Note that the applicability of lighthouse projects would be more limited, whereas technological improvement would be more widely relevant. Lighthouse projects could however be used as an illustration for a more general BEMP but would not be suitable on their own as a single example.
  - ACEA volunteered to consolidate inputs from industry where there is a case for not communicating directly with the JRC.



- JRC to prepare a template that focusses on the most important environmental impacts per function/process/maintenance groups and KPIs for the proposed BEMPs, along with an explanation of what is required/expected from the group. Following this, the JRC could draft a BEMP based on inputs received and share it with the working group.
- JRC to update BEMP template to include emissions to air and emissions to water separately.
- CLEPA also to be included in the data collection phase.

## 7 Next steps and revised timeline

### 7.1 Discussions

#### Overview of planned timeline

- It was discussed that TWG members would need **6-8 weeks** to allow stakeholders time enough to review the content of the next draft (Best Practice) report ahead of the final meeting.
- The final meeting of the TWG is planned for Summer 2016, with a view to publishing the final Report (taking TWG feedback into account) in Autumn 2016.
  - Thomas pointed out the need for adequate time to review the report, due to the need to gain wider agreement within the industry.
- Frederic noted that manufacturers would need several months to populate a template
- The JRC proposed a deadline of the end of the year to receive first data inputs, with further contact/clarifications in January/February 2016.
- The final meeting would involve a presentation of all the BEMPs and a discussion of the details with the TWG. A minimum of 3 months would be needed to revise the document after this.
- Tobias (ACEA) indicated that there could be a possibility to visit some plants in the timeframe available. A deadline for data provision of December could be difficult due to the Christmas period.

### 7.2 Actions

- JRC to circulate a revised timescale to the TWG.
- Provisional timescales proposed as:
  - October 2015 – template preparation
  - November 2015 - January 2016 – data collection
  - Early 2016 – site visits
  - February - May 2016 – Interaction with group and drafting of BEMPs
  - 6-8 weeks in advance of final TWG meeting – circulate the draft final report
  - June or September 2016 – TWG final meeting
  - October - December 2016 – finalisation and final consultation.

## ANNEX

### List of participants

Ioannis	ANTONOPOULOS	Joint Research Centre
Tobias	BAHR	ACEA
Simone	CENCETTI	Fiat Chrysler Automobiles Italy
Frederic	COENE	Aisin Europe
Paolo	CANFORA	Joint Research Centre
Franz-Josef	ECKER	Daimler AG
Kondo	EIJI	Aisin Seiki
Pierre	GAUDILLAT	Joint Research Centre
Georgina	GIBSON	Ricardo Energy & Environment
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Henk Jan	NIX	EGARA
Sébastien	PAQUOT	DG ENV
Thomas	RIEGER	AUDI AG
Belen	SÁNCHEZ	Gestamp
Yoshihiko	IZUKA	Aisin Seiki
Fernand	WEILAND	Apra Europe