

**Proposed Amendment**

USSA seeks to amend its Certificate to:

1. Add as "Members" within the meaning of Section 325.2 (1) of the Regulations (15 CFR 325.2(1)): Rhodia, Inc., Cranbury, New Jersey (Controlling Entity: Rhone-Poulenc, S.A., Courbevoise Cedex, France); and Rhone-Poulenc Animal Nutrition, Inc., Atlanta, Georgia (Controlling Entity: Rhone-Poulenc, S.A., Courbevoise Cedex, France).

2. Change the listing of the company name for current "Member," Rhone-Poulenc, Inc., to the new name of Rhone-Poulenc AG Company, Inc.

Dated: August 31, 1998.

**Morton Schnabel,**

Director, Office of Export Trading Company Affairs.

[FR Doc. 98-23823 Filed 9-2-98; 8:45 am]

BILLING CODE 3510-DR-P

**DEPARTMENT OF COMMERCE****International Trade Administration****Performance Review Board**

AGENCY: International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: Announcement of New Members for the Performance Review Board.

**FOR FURTHER INFORMATION CONTACT:**

LaVerne H. Hawkins, Department of Commerce, Office of Human Resources Management, Room 4803, Washington, D.C. 20230 202-482-2537.

**SUPPLEMENTARY INFORMATION:** This notice announces the appointment by the Under Secretary for International Trade, Ambassador David L. Aaron, of the Performance Review Board (PRB). This is a revised list of new members and the reappointment of a previous board member as listed in the August 13, 1996, **Federal Register** 61FR42004. The appointments are for a period of 2 years. The purpose of the International Trade Administration's Performance Review Board (PRB) is to review and make recommendations to the appointing authority on performance management issues such as appraisals and bonuses, ES-level Increases and Presidential Rank Awards for members of the Senior Executive Service (SES). The members are:

Eleanor Roberts Lewis, Chief Counsel for International Trade.	Non-ITA— Career.
Troy H. Cribb, Deputy Assistant Secretary for Textiles, Apparel and Consumer Goods.	Non-Career.

Mary Fran Kirchner, Deputy Assistant Secretary for Export Promotion Services.	Non-Career.
Henry H. Misco, Acting Deputy Assistant Secretary for Basic Industries.	Career.
Marjory Searing, Deputy Assistant Secretary for Japan.	Career.
Joseph Spetrini, Deputy Assistant Secretary for Anti-dumping Countervailing Duty Enforcement III.	Career.
Franklin J. Vargo, Deputy Assistant Secretary for Agreements Compliance.	Career.
LaVerne H. Hawkins, Office of Human Resources Management 202-482-2537.	Executive Secretary.

Dated: August 27, 1998.

**James T. King, Jr.,**

Human Resources Management, ITA.

[FR Doc. 98-23707 Filed 9-2-98; 8:45 am]

BILLING CODE 3510-25-P

**DEPARTMENT OF COMMERCE****National Oceanic and Atmospheric Administration**

[I.D. 081798C]

**Marine Mammals; File No. 786-1463**

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Issuance of permit.

SUMMARY: Notice is hereby given that Institute of Marine Sciences, Earth & Marine Sciences Bldg. A316, University of California, Santa Cruz, California 95064 [Principal Investigator (PI): Dr. Daniel P. Costa] has been issued a permit to take northern elephant seals (*Mirounga angustirostris*) and import samples from northern and southern elephant seals (*Mirounga leonina*) for purposes of scientific research.

**ADDRESSES:** The permit and related documents are available for review upon written request or by appointment in the following office(s):

Permits and Documentation Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910 (301/713-2289); and

Regional Administrator, Southwest Region, National Marine Fisheries Service, NOAA, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802-4213 (562/980-4001).

**FOR FURTHER INFORMATION CONTACT:** Ruth Johnson or Sara Shapiro, 301/713-2289.

**SUPPLEMENTARY INFORMATION:** On July 14, 1998, notice was published in the **Federal Register** (63 FR 37852) that a

request for a scientific research permit to take northern elephant seals (*Mirounga angustirostris*) had been submitted by the above-named organization. The requested permit has been issued under the authority of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*) and the Regulations Governing the Taking and Importing of Marine Mammals (50 CFR part 216).

Dated: August 24, 1998.

**Ann D. Terbush,**

Chief, Permits and Documentation Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 98-23798 Filed 9-2-98; 8:45 am]

BILLING CODE 3510-22-F

**DEPARTMENT OF COMMERCE****Patent and Trademark Office**

[Docket No. 970129014-8206-02]

RIN 0651-XX09

**Guidelines for the Examination of Claims Directed to Species of Chemical Compositions Based Upon a Single Prior Art Reference**

AGENCY: Patent and Trademark Office, Commerce.

ACTION: Notice.

SUMMARY: The Patent and Trademark Office (PTO) is publishing the final version of guidelines to be used by Office personnel in reviewing a certain type of patent application for compliance with 35 U.S.C. 103. The guidelines are to be used when examining claims directed to a species or subgenus of chemical compositions when: (1) the claims have been rejected based upon a single prior art reference, and (2) the single prior art reference discloses a genus embracing the claimed species or subgenus but does not expressly describe the particular claimed species or subgenus. Because these guidelines govern internal practices, they are exempt from notice and comment rulemaking under 5 U.S.C. 553(b)(A).

**DATES:** The guidelines are effective September 3, 1998.

**FOR FURTHER INFORMATION CONTACT:** Linda Moncys Isacson, Office of the Solicitor, P.O. Box 15667, Arlington, Virginia 22215 or Linda S. Therkorn, Box Comments, Assistant Commissioner for Patents, Washington, D.C. 20231, or by facsimile transmission to (703) 305-9373 or by electronic mail over the Internet to baird-comments@uspto.gov.

**SUPPLEMENTARY INFORMATION:**

### Discussion of Public Comments

Comments were received by the PTO from two different individuals and one organization in response to the Request for Comments on the Interim Guidelines for the Examination of Claims Directed to Species of Chemical Compositions Based Upon a Single Prior Art Reference published February 11, 1997 (62 FR 6217). All comments have been carefully considered.

The following comments have been substantively adopted to effect changes in the guidelines:

(1) A suggestion to annotate the flowchart with references to corresponding sections of text in the guidelines was adopted.

(2) One comment suggested that the guidelines inappropriately focussed solely on the number of possible members of a prior art genus to determine whether the prior art genus anticipated a claimed species or subgenus. Attention was drawn to the discussion of *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962) in the text at section II.A.4.a and note 22, which seemed to suggest that size of the genus alone was sufficient to support a finding of anticipation. These portions of the guidelines have been modified to indicate that size of the genus is only one factor to be considered in determining anticipation.

(3) One comment suggested that the guidelines be supplemented to direct Office personnel to consider the sufficiency of the preparative methods disclosed in the cited reference. Failure of a prior art reference to disclose or render obvious a method for making any composition of matter may preclude a conclusion that the composition would have been obvious if the disclosure is not enabling. However, once a *prima facie* case of obviousness is made out by the PTO, the initial burden of going forward with evidence to show that no process was known in the art for preparing the compound is on the applicant. Accordingly, the guidelines have been changed at section II.B to include consideration of sufficiency of disclosure of preparative methods as rebuttal evidence to overcome a *prima facie* case of obviousness.

(4) One comment suggested that the language in section II.A.2 of the guidelines and in corresponding portions of the flowchart instructing Office personnel to make explicit findings on the similarities and differences between "the closest prior art reference" and the claimed species or subgenus be changed to direct findings to be made between the "closest disclosed species or subgenus"

and the claimed species or subgenus for accuracy and clarity. This change has been made in the text.

(5) One comment suggested that section II.A.4.d be clarified to indicate that the utility disclosed in a reference need not be the same as the stated utility of the claimed compound. Language has been added to indicate that any useful property may be the basis of a finding of motivation.

(6) One comment suggested that language in section II.B. stating that evidence of an unexpected property may not be sufficient to overcome a *prima facie* case of obviousness, regardless of the scope of the showing, is not accurate in view of the law. Language has been added to the associated footnote to clarify that a showing of an unexpected property is sufficient in most circumstances.

The following comments have been considered but have not been adopted for the reasons discussed below:

(1) One comment suggested that more emphasis be placed on additional references which may teach away from the claimed compound(s) due to a disclosure of related compounds having or expected to have disadvantages not possessed by the claimed compound(s). This comment was not adopted because it focuses on "additional references," whereas the scope of these guidelines is directed to situations involving rejections over a single reference. The guidelines already clearly instruct Office personnel that they must consider any additional references or evidence of teaching away that are present.

(2) One comment suggested that the guidelines were too limited in scope because they focused on rejections based on a single reference as opposed to rejections based on more than one reference. The scope of these guidelines is intended to address a specific issue, i.e., the situation where only one reference disclosing a genus but not the claimed species is found. Although the principles discussed in these guidelines are generally applicable to all rejections under 35 U.S.C. 103, the explicit scope of these guidelines will not be changed.

(3) One comment suggested that section II.A.4.f of the guidelines inappropriately instructs Office personnel to focus only on evidence supporting a rejection rather than making a complete analysis. Section II.A.4.f of the guidelines additionally instructs Office personnel to consider the totality of the evidence in each case. Furthermore, Office personnel are instructed in section II.B to consider whether rebuttal evidence overcomes a *prima facie* case of obviousness and in

section III to reconsider all evidence in reaching a conclusion. Thus, the guidelines presently clearly require all evidence to be considered, not only evidence supporting a rejection.

(4) One comment suggested that the last sentence of section II.A.4.c assumes that a generic teaching in a reference, by itself, is never enough to make out a *prima facie* case of obviousness. The referenced language does not suggest this, but rather it merely states the general proposition that in most cases, additional teachings of structural similarity to the disclosed species or subgenus are necessary. Accordingly, no change has been made.

(5) One comment suggested that the guidelines address the significance of the type of reference involved, i.e. whether there is a difference between a journal publication, a U.S. Patent, a foreign patent, etc. This suggestion has not been adopted, because for substantive analysis under 35 U.S.C. 103, each reference should be considered for all of its teachings, regardless of its form.

(6) One comment suggested that the guidelines address the significance of the presence or absence of any activity testing of disclosed species in the reference. The guidelines already instruct Office personnel to consider any teachings of similar properties or uses, predictability of the technology, and any other teachings present in the reference that would support selection of the claimed compound. Consideration of any disclosed testing data is subsumed in these considerations.

### I. Guidelines for the Examination of Claims Directed to Species of Chemical Compositions Based Upon a Single Prior Art Reference

These "Genus-Species Guidelines" are to assist Office personnel in the examination of applications which contain claims to species or a subgenus of chemical compositions for compliance with 35 U.S.C. 103 based upon a single prior art reference which discloses a genus encompassing the claimed species or subgenus but does not expressly disclose the particular claimed species or subgenus. Office personnel should attempt to find additional prior art to show that the differences between the prior art primary reference and the claimed invention as a whole would have been obvious. Where such additional prior art is not found, Office personnel should follow these guidelines to determine whether a single reference 35 U.S.C. 103 rejection would be appropriate. The guidelines are based on the Office's

current understanding of the law and are believed to be fully consistent with binding precedent of the Supreme Court, the Federal Circuit, and the Federal Circuit's predecessor courts.

The analysis of the guidelines begins at the point during examination after a single prior art reference is found disclosing a genus encompassing the claimed species or subgenus. Before reaching this point, Office personnel should follow appropriate antecedent examination procedures. Accordingly, Office personnel should first analyze the claims as a whole in light of and consistent with the written description, considering all claim limitations.<sup>1</sup> Next, Office personnel should conduct a thorough search of the prior art and identify all relevant references.<sup>2</sup> If the most relevant prior art consists of a single prior art reference disclosing a genus encompassing the claimed species or subgenus, Office personnel should follow the guidelines set forth herein.\*

These guidelines do not constitute substantive rulemaking and hence do not have the force and effect of law. Rather, they are to assist Office personnel in analyzing claimed subject matter for compliance with substantive law. Thus, rejections must be based upon the substantive law, and it is these rejections which are appealable, not any failure by Office personnel to follow these guidelines.

Office personnel are to rely on these guidelines in the event of any inconsistent treatment of issues between these guidelines and any earlier provided guidance from the Office.

## II. Determine Whether the Claimed Species or Subgenus Would Have Been Obvious to One of Ordinary Skill in the Pertinent Art at the Time the Invention Was Made

The patentability of a claim to a specific compound or subgenus embraced by a prior art genus should be analyzed no differently than any other claim for purposes of 35 U.S.C. 103.<sup>3</sup> A determination of patentability under 35 U.S.C. 103 should be made upon the facts of the particular case in view of the totality of the circumstances.<sup>4</sup> Use of *per se* rules by Office personnel is improper for determining whether claimed subject matter would have been obvious under 35 U.S.C. 103.<sup>5</sup> The fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness.<sup>6</sup>

A proper obviousness analysis involves a three step process. First,

Office personnel should establish a *prima facie* case of unpatentability considering the factors set out by the Supreme Court in *Graham v. John Deere*.<sup>7</sup> If a *prima facie* case is established, the burden shifts to applicant to come forward with rebuttal evidence or argument to overcome the *prima facie* case.<sup>8</sup> Finally, Office personnel should evaluate the totality of the facts and all of the evidence to determine whether they still support a conclusion that the claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made.<sup>9</sup>

### A. Establishing a Prima Facie Case of Obviousness

To establish a *prima facie* case of obviousness in a genus-species chemical composition situation, as in any other 35 U.S.C. 103 case, it is essential that Office personnel find some motivation or suggestion to make the claimed invention in light of the prior art teachings.<sup>10</sup> In order to find such motivation or suggestion there should be a reasonable likelihood that the claimed invention would have the properties disclosed by the prior art teachings.<sup>11</sup> These disclosed findings should be made with a complete understanding of the first three "Graham factors."<sup>12</sup> Thus, Office personnel should (1) determine the "scope and content of the prior art"; (2) ascertain the "differences between the prior art and the claims at issue"; and (3) determine "the level of ordinary skill in the pertinent art."<sup>13</sup>

#### 1. Determine the Scope and Content of the Prior Art

As an initial matter, Office personnel should determine the scope and content of the relevant prior art. Each reference must qualify as prior art under 35 U.S.C. 102,<sup>14</sup> and should be in the field of applicant's endeavor, or be reasonably pertinent to the particular problem with which the inventor was concerned.<sup>15</sup>

In the case of a prior art reference disclosing a genus, Office personnel should make findings as to (1) the structure of the disclosed prior art genus and that of any expressly described species or subgenus within the genus; (2) any physical or chemical properties and utilities disclosed for the genus, as well as any suggested limitations on the usefulness of the genus, and any problems alleged to be addressed by the genus; (3) the predictability of the technology; and (4) the number of species encompassed by the genus taking into consideration all of the variables possible.

#### 2. Ascertain the Differences Between the Closest Disclosed Prior Art Species or Subgenus of Record and the Claimed Species or Subgenus

Once the structure of the disclosed prior art genus and that of any expressly described species or subgenus within the genus are identified, Office personnel should compare it to the claimed species or subgenus to determine the differences. Through this comparison, the closest disclosed species or subgenus in the prior art reference should be identified and compared to that claimed. Office personnel should make explicit findings on the similarities and differences between the closest disclosed prior art species or subgenus of record and the claimed species or subgenus including findings relating to similarity of structure, chemical properties and utilities.<sup>16</sup>

#### 3. Determine the Level of Skill in the Art

Office personnel should evaluate the prior art from the standpoint of the hypothetical person having ordinary skill in the art at the time the claimed invention was made.<sup>17</sup> In most cases, the only facts of record pertaining to the level of skill in the art will be found within the prior art reference. However, any additional evidence presented by applicant should be evaluated.

#### 4. Determine Whether One of Ordinary Skill in the Art Would Have Been Motivated To Select the Claimed Species or Subgenus

In light of the findings made relating to the three *Graham* factors, Office personnel should determine whether one of ordinary skill in the relevant art would have been motivated to make the claimed invention as a whole, *i.e.*, to select the claimed species or subgenus from the disclosed prior art genus.<sup>18</sup> To address this key issue, Office personnel should consider all relevant prior art teachings, focusing on the following, where present.

*a. Consider the size of the genus.* Consider the size of the prior art genus, bearing in mind that size alone cannot support an obviousness rejection.<sup>19</sup> There is no absolute correlation between the size of the prior art genus and a conclusion of obviousness.<sup>20</sup> Thus, the mere fact that a prior art genus contains a small number of members does not create a *per se* rule of obviousness. Some motivation to select the claimed species or subgenus must be taught by the prior art.<sup>21</sup> However, a genus may be so small that, when considered in light of the totality of the circumstances, it

\* Footnotes at end of docket.

would anticipate the claimed species or subgenus. For example, it has been held that a prior art genus containing only 20 compounds and a limited number of variations in the generic chemical formula inherently anticipated a claimed species within the genus because "one skilled in [the] art would . . . envisage each member" of the genus.<sup>22</sup>

*b. Consider the express teachings.* If the prior art reference expressly teaches a particular reason to select the claimed species or subgenus, Office personnel should point out the express disclosure which would have motivated one of ordinary skill in the art to select the claimed invention.<sup>23</sup>

*c. Consider the teachings of structural similarity.* Consider any teachings of a "typical," "preferred," or "optimum" species or subgenus within the disclosed genus. If such a species or subgenus is structurally similar to that claimed, its disclosure may motivate one of ordinary skill in the art to choose the claimed species or subgenus from the genus,<sup>24</sup> based on the reasonable expectation that structurally similar species usually have similar properties.<sup>25</sup> The utility of such properties will normally provide some motivation to make the claimed species or subgenus.<sup>26</sup>

In making an obviousness determination, Office personnel should consider the number of variables which must be selected or modified, and the nature and significance of the differences between the prior art and the claimed invention.<sup>27</sup> The closer the physical and chemical similarities between the claimed species or subgenus and any exemplary species or subgenus disclosed in the prior art, the greater the expectation that the claimed subject matter will function in an equivalent manner to the genus.<sup>28</sup>

Similarly, consider any teaching or suggestion in the reference of a preferred species or subgenus that is significantly different in structure from the claimed species or subgenus. Such a teaching may weigh against selecting the claimed species or subgenus and thus against a determination of obviousness.<sup>29</sup> For example, teachings of preferred species of a complex nature within a disclosed genus may motivate an artisan of ordinary skill to make similar complex species and thus teach away from making simple species within the genus.<sup>30</sup> Concepts used to analyze the structural similarity of chemical compounds in other types of chemical cases are equally useful in analyzing genus-species cases.<sup>31</sup> Generally, some teaching of a structural similarity will be necessary to suggest

selection of the claimed species or subgenus.<sup>32</sup>

*d. Consider the teachings of similar properties or uses.* Consider the properties and utilities of the structurally similar prior art species or subgenus. It is the properties and utilities that provide real world motivation for a person of ordinary skill to make species structurally similar to those in the prior art.<sup>33</sup> Conversely, lack of any known useful properties weighs against a finding of motivation to make or select a species or subgenus.<sup>34</sup> However, the prior art need not disclose a newly discovered property in order for there to be a *prima facie* case of obviousness.<sup>35</sup> If the claimed invention and the structurally similar prior art species share any useful property, that will generally be sufficient to motivate an artisan of ordinary skill to make the claimed species.<sup>36</sup> For example, based on a finding that a tri-ortho ester and a tetra-ortho ester behave similarly in certain chemical reactions, it has been held that one of ordinary skill in the relevant art would have been motivated to select either structure.<sup>37</sup> In fact, similar properties may normally be presumed when compounds are very close in structure.<sup>38</sup> Thus, evidence of similar properties or evidence of any useful properties disclosed in the prior art that would be expected to be shared by the claimed invention weighs in favor of a conclusion that the claimed invention would have been obvious.<sup>39</sup>

*e. Consider the predictability of the technology.* Consider the predictability of the technology.<sup>40</sup> If the technology is unpredictable, it is less likely that structurally similar species will render a claimed species obvious because it may not be reasonable to infer that they would share similar properties.<sup>41</sup> However, obviousness does not require absolute predictability, only a reasonable expectation of success, *i.e.*, a reasonable expectation of obtaining similar properties.<sup>42</sup>

*f. Consider any other teaching to support the selection of the species or subgenus.* The categories of relevant teachings enumerated above are those most frequently encountered in a genus-species case, but they are not exclusive. Office personnel should consider the totality of the evidence in each case. In unusual cases, there may be other relevant teachings sufficient to support the selection of the species or subgenus and, therefore, a conclusion of obviousness.

**5. Make express fact-findings and determine whether they support a *prima facie* case of obviousness.** Based on the evidence as a whole,<sup>43</sup> Office personnel should make express fact-findings

relating to the *Graham* factors, focusing primarily on the prior art teachings discussed above. The fact-findings should specifically articulate what teachings or suggestions in the prior art would have motivated one of ordinary skill in the art to select the claimed species or subgenus.<sup>44</sup> Thereafter, it should be determined whether these findings, considered as a whole, support a *prima facie* case that the claimed invention would have been obvious to one of ordinary skill in the relevant art at the time the invention was made.

#### *B. Determining Whether Rebuttal Evidence Is Sufficient To Overcome the Prima Facie Case of Obviousness*

If a *prima facie* case of obviousness is established, the burden shifts to the applicant to come forward with arguments and/or evidence to rebut the *prima facie* case.<sup>45</sup> Rebuttal evidence and arguments can be presented in the specification,<sup>46</sup> by counsel,<sup>47</sup> or by way of an affidavit or declaration under 37 CFR § 1.132.<sup>48</sup> However, arguments of counsel cannot take the place of factually supported objective evidence.<sup>49</sup>

Office personnel should consider all rebuttal arguments and evidence presented by applicants.<sup>50</sup> Rebuttal evidence may include evidence of "secondary considerations," such as "commercial success, long felt but unsolved needs, [and] failure of others,"<sup>51</sup> evidence that the claimed invention yields unexpectedly improved properties or properties not present in the prior art,<sup>52</sup> or evidence that the claimed invention was copied by others.<sup>53</sup> It may also include evidence of the state of the art, the level of skill in the art, and the beliefs of those skilled in the art.<sup>54</sup> For example, rebuttal evidence may include a showing that the prior art fails to disclose or render obvious a method for making the compound, which would preclude a conclusion of obviousness of the compound.<sup>55</sup>

Consideration of rebuttal evidence and arguments requires Office personnel to weigh the proffered evidence and arguments. Office personnel should avoid giving evidence no weight, except in rare circumstances.<sup>56</sup> However, to be entitled to substantial weight, the applicant should establish a nexus between the rebuttal evidence and the claimed invention,<sup>57</sup> *i.e.*, objective evidence of nonobviousness must be attributable to the claimed invention.<sup>58</sup> Additionally, the evidence must be reasonably commensurate in scope with the claimed invention.<sup>59</sup> However, an exemplary showing may be sufficient to establish a reasonable correlation

between the showing and the entire scope of the claim, when viewed by a skilled artisan.<sup>60</sup> On the other hand, evidence of an unexpected property may not be sufficient regardless of the scope of the showing.<sup>61</sup> Accordingly, each case should be evaluated individually based on the totality of the circumstances.

Office personnel should not evaluate rebuttal evidence for its "knockdown" value against the *prima facie* case<sup>62</sup> or summarily dismiss it as not compelling or insufficient. If the evidence is deemed insufficient to rebut the *prima facie* case of obviousness, Office personnel should specifically set forth the facts and reasoning that justify this conclusion.

### III. Reconsider All Evidence and Clearly Communicate Findings and Conclusions

A determination under 35 U.S.C. § 103 should rest on *all* the evidence and should not be influenced by any earlier conclusion.<sup>63</sup> Thus, once the applicant has presented rebuttal evidence, Office personnel should reconsider any initial obviousness determination in view of the entire record.<sup>64</sup> All the proposed rejections and their bases should be reviewed to confirm their correctness. Only then should any rejection be imposed in an Office action. The Office action should clearly communicate the Office's findings and conclusions, articulating how the conclusions are supported by the findings.

Where applicable, the findings should clearly articulate which portions of the reference support any rejection. Explicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. § 103 ground of rejection.<sup>65</sup> Conclusory statements of similarity or motivation, without any articulated rationale or evidentiary support, do not constitute sufficient factual findings.

### VI. Endnotes

<sup>1</sup> When evaluating the scope of a claim, every limitation in the claim must be considered. E.g., *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995). However, the claimed invention may not be dissected into discrete elements to be analyzed in isolation, but must be considered as a whole. E.g., *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); *Jones v. Hardy*, 727 F.2d 1524, 1530, 220 USPQ 1021, 1026 (Fed. Cir. 1983) ("treating the advantage as the invention disregards the statutory requirement that the invention be viewed 'as a whole'").

<sup>2</sup> Both claimed and unclaimed aspects of the invention should be searched if there is

a reasonable expectation that the unclaimed aspects may be later claimed.

<sup>3</sup> "The section 103 requirement of unobviousness is no different in chemical cases than with respect to other categories of patentable inventions." *In re Papesch*, 315 F.2d 381, 385, 137 USPQ 43, 47 (CCPA 1963).

<sup>4</sup> E.g., *In re Dillon*, 919 F.2d 688, 692-93, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (in banc).

<sup>5</sup> E.g., *In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996); *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995); *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994).

<sup>6</sup> *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) ("The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious."); *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (Federal Circuit has "decline[d] to extract from *Merck & Co. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir. 1989) the rule that . . . regardless of how broad, a disclosure of a chemical genus renders obvious any species that happens to fall within it."). See also *In re Deuel*, 51 F.3d 1552, 1559, 34 USPQ2d 1210, 1215 (Fed. Cir. 1995).

<sup>7</sup> E.g., *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) ("The PTO bears the burden of establishing a case of *prima facie* obviousness."); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

*Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966), requires that to make out a case of obviousness, one must: (1) determine the scope and contents of the prior art; (2) ascertain the differences between the prior art and the claims in issue; (3) determine the level of skill in the pertinent art; and (4) evaluate any evidence of secondary considerations.

<sup>8</sup> E.g., *Bell*, 991 F.2d at 783-84, 26 USPQ2d at 1531; *Rijckaert*, 9 F.3d at 1532, 28 USPQ2d at 1956; *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444.

<sup>9</sup> *Id.*

<sup>10</sup> E.g., *In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996) ("[T]he mere possibility that one of the esters or the active methylene group-containing compounds . . . could be modified or replaced such that its use would lead to the specific sulfoalkylated resin recited in claim 8 does not make the process recited in claim 8 obvious "unless the prior art suggested the desirability of [such a] modification" or replacement.") (quoting *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991) ("[A] proper analysis under § 103 requires, *inter alia*, consideration of . . . whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process.").

<sup>11</sup> The prior art disclosure may be express, implicit, or inherent. Regardless of the type

of disclosure, the prior art must provide some motivation to one of ordinary skill in the art to make the claimed invention in order to support a conclusion of obviousness. E.g., *Vaeck*, 947 F.2d at 493, 20 USPQ2d at 1442 (A proper obviousness analysis requires consideration of "whether the prior art would also have revealed that in so making or carrying out [the claimed invention], those of ordinary skill would have a reasonable expectation of success."); *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988) ("The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art."); *Hodosh v. Block Drug Co.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

<sup>12</sup> When evidence of secondary considerations such as unexpected results is initially before the Office, for example in the specification, that evidence should be considered in deciding whether there is a *prima facie* case of obviousness. The determination as to whether a *prima facie* case exists should be made on the full record before the Office at the time of the determination.

<sup>13</sup> *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). Accord, e.g., *In re Paulsen*, 30 F.3d 1475, 1482, 31 USPQ2d 1671, 1676 (Fed. Cir. 1994).

<sup>14</sup> E.g., *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987) ("Before answering *Graham's* "content" inquiry, it must be known whether a patent or publication is in the prior art under 35 U.S.C. § 102.").

<sup>15</sup> *In re Oetiker*, 977 F.2d 1443, 1447, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Accord, e.g., *In re Clay*, 966 F.2d 656, 658-59, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992).

<sup>16</sup> *In Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537, 218 USPQ 871, 877 (Fed. Cir. 1983), the Court noted that "the question under 35 U.S.C. § 103 is not whether the differences [between the claimed invention and the prior art] would have been obvious" but "whether the claimed invention as a whole would have been obvious." (emphasis in original).

<sup>17</sup> See, *Ryko Manufacturing Co. v. Nu-Star Inc.*, 950 F.2d 714, 718, 21 USPQ2d 1053, 1057 (Fed. Cir. 1991) ("The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry."); *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988) (evidence must be viewed from position of ordinary skill, not of an expert).

<sup>18</sup> E.g., *Ochiai*, 71 F.3d at 1569-70, 37 USPQ2d at 1131; *Deuel*, 51 F.3d at 1557, 34 USPQ2d at 1214 ("[A] *prima facie* case of unpatentability requires that the teachings of the prior art suggest the *claimed compounds* to a person of ordinary skill in the art." (emphasis in original)); *Jones*, 958 F.2d at 351, 21 USPQ2d at 1943-44 (Fed. Cir. 1992); *Dillon*, 919 F.2d at 692, 16 USPQ2d at 1901; *In re Lahu*, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984) ("The prior art must provide one of ordinary skill in the art

the motivation to make the proposed molecular modifications needed to arrive at the claimed compound." See also *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996)(discussing motivation to combine).

<sup>19</sup> See, e.g., *Baird*, 16 F.3d at 383, 29 USPQ2d at 1552 (observing that "it is not the mere number of compounds in this limited class which is significant here but, rather, the total circumstances involved").

<sup>20</sup> *Id.*

<sup>21</sup> See, e.g., *Deuel*, 51 F.3d at 1558-59, 34 USPQ2d at 1215 ("No particular one of these DNAs can be obvious unless there is something in the prior art to lead to the particular DNA and indicate that it should be prepared."); *Baird*, 16 F.3d at 382-83, 29 USPQ2d at 1552; *Bell*, 991 F.2d at 784, 26 USPQ2d at 1531 ("Absent anything in the cited prior art suggesting which of the 10<sup>36</sup> possible sequences suggested by Rinderknecht corresponds to the IGF gene, the PTO has not met its burden of establishing that the prior art would have suggested the claimed sequences.").

<sup>22</sup> *In re Petering*, 301 F.2d 676, 681, 133 USPQ 275, 280 (CCPA 1962)(emphasis in original). More specifically, the court in *Petering* stated:

"A simple calculation will show that, excluding isomerism within certain of the R groups, the limited class we find in Karrer contains only 20 compounds. However, we wish to point out that it is not the mere number of compounds in this limited class which is significant here but, rather, the total circumstances involved, including such factors as the limited number of variations for R, only two alternatives for Y and Z, no alternatives for the other ring positions, and a large unchanging parent structural nucleus. With these circumstances in mind, it is our opinion that Karrer has described to those with ordinary skill in this art each of the various permutations here involved as fully as if he had drawn each structural formula or had written each name."

*Id.* (emphasis in original).

Accord *In re Schaumann*, 572 F.2d 312, 316, 197 USPQ 5, 9 (CCPA 1978)(prior art genus encompassing claimed species which disclosed preference for lower alkyl secondary amines and properties possessed by the claimed compound constituted description of claimed compound for purposes of 35 U.S.C. § 102(b)). C.f., *In re Ruschig*, 343 F.2d 965, 974, 145 USPQ 274, 282 (CCPA 1965)(Rejection of claimed compound in light of prior art genus based on *Petering* is not appropriate where the prior art does not disclose a small recognizable class of compounds with common properties.).

<sup>23</sup> An express teaching may be based on a statement in the prior art reference such as an art recognized equivalence. For example, see *Merck & Co. v. Biocraft Labs.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989) (holding claims directed to diuretic compositions comprising a specific mixture of amiloride and hydrochlorothiazide were obvious over a prior art reference expressly teaching that amiloride was a pyrazinoylguanidine which could be co-administered with potassium excreting

diuretic agents, including hydrochlorothiazide which was a named example, to produce a diuretic with desirable sodium and potassium eliminating properties). See also, *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1312 (Fed. Cir. 1996)(holding there is sufficient motivation to combine teachings of prior art to achieve claimed invention where one reference specifically refers to the other).

<sup>24</sup> E.g., *Dillon*, 919 F.2d at 696, 16 USPQ2d at 1904. See also *Deuel*, 51 F.3d at 1558, 34 USPQ2d at 1214 ("Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds. For example, a prior art compound may suggest its homologs because homologs often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties.").

<sup>25</sup> E.g., *Dillon*, 919 F.2d at 693, 16 USPQ2d at 1901.

<sup>26</sup> See *id.*

<sup>27</sup> E.g., *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (reversing obviousness rejection of novel dicamba salt with acyclic structure over broad prior art genus encompassing claimed salt, where disclosed examples of genus were dissimilar in structure, lacking an ether linkage or being cyclic); *In re Susi*, 440 F.2d 442, 445, 169 USPQ 423, 425 (CCPA 1971)(the difference from the particularly preferred subgenus of the prior art was a hydroxyl group, a difference conceded by applicant "to be of little importance.").

In the area of biotechnology, an exemplified species may differ from a claimed species by a conservative substitution ("the replacement in a protein of one amino acid by another, chemically similar, amino acid \* \* \* [which] is generally expected to lead to either no change or only a small change in the properties of the protein." *Dictionary of Biochemistry and Molecular Biology* 97 (John Wiley & Sons, 2d ed. 1989)). The effect of a conservative substitution on protein function depends on the nature of the substitution and its location in the chain. Although at some locations a conservative substitution may be benign, in some proteins only one amino acid is allowed at a given position. For example, the gain or loss of even one methyl group can destabilize the structure if close packing is required in the interior of domains. James Darnell et al., *Molecular Cell Biology* 51 (2d ed. 1990).

<sup>28</sup> E.g., *Dillon*, 919 F.2d at 696, 16 USPQ2d at 1904 (and cases cited therein). C.f. *Baird*, 16 F.3d at 382-83, 29 USPQ2d at 1552 (disclosure of dissimilar species can provide teaching away).

<sup>29</sup> *Baird*, 16 F.3d at 382-83, 29 USPQ2d at 1552 (reversing obviousness rejection of species in view of large size of genus and disclosed "optimum" species which differed greatly from and were more complex than the claimed species); *Jones*, 958 F.2d at 350, 21 USPQ2d at 1943 (reversing obviousness rejection of novel dicamba salt with acyclic structure over broad prior art genus encompassing claimed salt, where disclosed examples of genus were dissimilar in

structure, lacking an ether linkage or being cyclic).

<sup>30</sup> *Baird*, 16 F.3d at 382, 29 USPQ2d at 1552. See also *Jones*, 958 F.2d at 350, 21 USPQ2d at 1943 (disclosed salts of genus held not sufficiently similar in structure to render claimed species *prima facie* obvious).

<sup>31</sup> For example, a claimed tetra-orthoester fuel composition was held to be obvious in light of a prior art tri-orthoester fuel composition based on their structural and chemical similarity and similar use as fuel additives. *Dillon*, 919 F.2d at 692-93, 16 USPQ2d at 1900-02.

Likewise, claims to amitriptyline used as an antidepressant were held obvious in light of the structural similarity to imipramine, a known antidepressant prior art compound, where both compounds were tricyclic dibenzo compounds and differed structurally only in the replacement of the unsaturated carbon atom in the center ring of amitriptyline with a nitrogen atom in imipramine. *In re Merck & Co.*, 800 F.2d 1091, 1096-97, 231 USPQ 375, 378-79 (Fed. Cir. 1986).

Other structural similarities have been found to support a *prima facie* case of obviousness. E.g., *In re May*, 574 F.2d 1082, 1093-95, 197 USPQ 601, 610-11 (CCPA 1978) (stereoisomers); *In re Wilder*, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977)(adjacent homologs and structural isomers); *In re Hoch*, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (CCPA 1970)(acid and ethyl ester); *In re Druey*, 319 F.2d 237, 240, 138 USPQ 39, 41 (CCPA 1963)(omission of methyl group from pyrazole ring).

<sup>32</sup> *Id.*

<sup>33</sup> *Dillon*, 919 F.2d at 697, 16 USPQ2d at 1905; *In re Stemmiski*, 444 F.2d 581, 586, 170 USPQ 343, 348 (CCPA 1971).

<sup>34</sup> *In re Albrecht*, 514 F.2d 1389, 1392, 1395-96, 185 USPQ 585, 587, 590 (CCPA 1975)(The prior art compound so irritated the skin that it could not be regarded as useful for the disclosed anesthetic purpose, and therefore a person skilled in the art would not have been motivated to make related compounds.); *Stemmiski*, 444 F.2d at 586, 170 USPQ at 348 (close structural similarity alone is not sufficient to create a *prima facie* case of obviousness when the reference compounds lack utility, and thus there is no motivation to make related compounds.).

<sup>35</sup> *Dillon*, 919 F.2d at 697, 16 USPQ2d at 1904-05 (and cases cited therein).

<sup>36</sup> E.g., *id.*

<sup>37</sup> *Id.* at 692, 16 USPQ2d at 1900-01.

<sup>38</sup> *Dillon*, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also *In re Grabiak*, 769 F.2d 729, 731, 226 USPQ 870, 871 (Fed. Cir. 1985)("When chemical compounds have 'very close' structural similarities and similar utilities, without more a *prima facie* case may be made.").

<sup>39</sup> *Dillon*, 919 F.2d at 697-98, 16 USPQ2d at 1905; *In re Wilder*, 563 F.2d 457, 461, 195 USPQ 426, 430 (CCPA 1977); *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

<sup>40</sup> See, e.g., *Dillon*, 919 F.2d at 692-97, 16 USPQ2d at 1901-05; *In re Grabiak*, 769 F.2d 729, 732-33, 226 USPQ 870, 872 (Fed. Cir. 1985).

<sup>41</sup> See e.g., *In re May*, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978)(*prima facie*

obviousness of claimed analgesic compound based on structurally similar prior art isomer was rebutted with evidence demonstrating that analgesia and addiction properties could not be reliably predicted on the basis of chemical structure); *In re Schechter*, 205 F.2d 185, 191, 98 USPQ 144, 150 (CCPA 1953)(unpredictability in the insecticide field, with homologs, isomers and analogs of known effective insecticides having proven ineffective as insecticides, was considered as a factor weighing against a conclusion of obviousness of the claimed compounds).

<sup>42</sup> See, e.g., *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988).

<sup>43</sup> *In re Bell*, 991 F.2d 781, 784, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993); *In re Kulling*, 897 F.2d 1147, 1149, 14 USPQ2d 1056, 1057 (Fed. Cir. 1990).

<sup>44</sup> *Kulling*, 897 F.2d at 1149, 14 USPQ2d at 1058; *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1579 n.42, 1 USPQ2d 1593, 1606 n.42 (Fed. Cir. 1987).

<sup>45</sup> E.g., *Dillon*, 919 F.2d at 692, 16 USPQ2d at 1901.

<sup>46</sup> *In re Soni*, 54 F.3d 746, 750, 34 USPQ2d 1684, 1687 (Fed. Cir. 1995).

<sup>47</sup> *In re Chu*, 66 F.3d 292, 299, 36 USPQ2d 1089, 1094-95 (Fed. Cir. 1995).

<sup>48</sup> E.g., *Soni*, 54 F.3d at 750, 34 USPQ2d at 1687; *In re Piasecki*, 745 F.2d 1468, 1474, 223 USPQ 785, 789-90 (Fed. Cir. 1984).

<sup>49</sup> E.g., *In re Huang*, 100 F.3d 135, 139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996); *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

<sup>50</sup> E.g., *In re Soni*, 54 F.3d 746, 750, 34 USPQ2d 1684, 1687 (Fed. Cir. 1995) (error not to consider evidence presented in the specification). C.f., *In re Alton*, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996)(error not to consider factual evidence submitted to counter a section 112 rejection); *In re Beattie*, 974 F.2d 1309, 1313, 24 USPQ2d 1040, 1042-43 (Fed. Cir. 1992)(Office personnel should consider declarations from those skilled in the art praising the claimed invention and opining that the art teaches away from the invention.); *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788 ("[Rebuttal evidence] may relate to any of the *Graham* factors including the so-called secondary considerations.").

<sup>51</sup> *Graham v. John Deere Co.*, 383 U.S. at 17, 148 USPQ at 467. See also, e.g., *In re Piasecki*, 745 F.2d 1468, 1473, 223 USPQ 785, 788 (Fed. Cir. 1984) (commercial success).

<sup>52</sup> Rebuttal evidence may consist of a showing that the claimed compound possesses unexpected properties. *Dillon*, 919 F.2d at 692-93, 16 USPQ2d at 1901. A showing of unexpected results must be based on evidence, not argument or speculation. *In re Mayne*, 104 F.3d 1339, 1343-44, 41 USPQ2d 1451, 1455-56 (Fed. Cir. 1997)(conclusory statements that claimed compound possesses unusually low immune response or unexpected biological activity that is unsupported by comparative data held insufficient to overcome prima facie case of obviousness).

<sup>53</sup> E.g., *In re GPAC*, 57 F.3d 1573, 1580, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995); *Hybritech Inc. v. Monoclonal Antibodies*, 802 F.2d 1367, 1380, 231 USPQ 81, 90 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987).

<sup>54</sup> E.g., *In re Oelrich*, 579 F.2d 86, 91-92, 198 USPQ 210, 214 (CCPA 1978) (Expert opinions regarding the level of skill in the art were probative of the nonobviousness of the claimed invention.); *Piasecki*, 745 F.2d at 1471, 1473-74, 223 USPQ at 790 (Evidence of non-technological nature is pertinent to the conclusion of obviousness. The declarations of those skilled in the art regarding the need for the invention and its reception by the art were improperly discounted by the Board); *Beattie*, 974 F.2d at 1313, 24 USPQ2d at 1042-43 (Seven declarations provided by music teachers opining that the art teaches away from the claimed invention must be considered, but were not probative because they did not contain facts and did not deal with the specific prior art that was the subject of the rejection.).

<sup>55</sup> A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention. The court in *In re Hoeksema*, 399 F.2d 269, 274, 158 USPQ 596, 601 (CCPA 1968), stated:

"Thus, upon careful reconsideration it is our view that if the prior art of record fails to disclose or render obvious a method for making a claimed compound, at the time the invention was made, it may not be legally concluded that the compound itself is in the possession of the public. [footnote omitted.] In this context, we say that the absence of a known or obvious process for making the claimed compounds overcomes a presumption that the compounds are obvious, based on close relationships between their structures and those of prior art compounds."

The *Hoeksema* court further noted that once a *prima facie* case of obviousness is made by the PTO through citation of references, the burden is on the applicant to produce contrary evidence establishing that the reference being relied on would not enable a skilled artisan to produce the different compounds claimed. *Id.* at 274-75, 158 USPQ at 601. See also *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 295, 297, 227 USPQ 657, 666, 667 (Fed. Cir. 1985) (citing *Hoeksema* for the proposition above); *In re Grose*, 592 F.2d 1161, 1168, 201 USPQ 57, 63-64 (CCPA 1979) ("One of the assumptions underlying a prima facie obviousness rejection based upon a structural relationship between compounds, such as adjacent homologs, is that a method disclosed for producing one would provide those skilled in the art with a method for producing the other. \* \* \* Failure of the prior art to disclose or render obvious a method for making any composition of matter, whether a compound or a mixture of compounds like a zeolite, precludes a conclusion that the composition would have been obvious.")

<sup>56</sup> *Id.* See also *In re Alton*, 76 F.3d 1168, 1174-75, 37 USPQ2d 1578, 1582-83 (Fed. Cir. 1996).

<sup>57</sup> The Federal Circuit has acknowledged that applicant bears the burden of establishing nexus, stating:

"In the *ex parte* process of examining a patent application, however, the PTO lacks the means or resources to gather evidence

which supports or refutes the applicant's assertion that the sales constitute commercial success. C.f. *Ex parte Remark*, 15 USPQ2d 1498, 1503 ([BPAI] 1990)(evidentiary routine of shifting burdens in civil proceedings inappropriate in *ex parte* prosecution proceedings because examiner has no available means for adducing evidence). Consequently, the PTO must rely upon the applicant to provide hard evidence of commercial success."

*In re Huang*, 100 F.3d 135, 139-40, 40 USPQ2d 1685, 1689 (Fed. Cir. 1996). See also *GPAC*, 57 F.3d at 1580, 35 USPQ2d at 1121; *In re Paulsen*, 30 F.3d 1475, 1482, 31 USPQ2d 1671, 1676 (Fed. Cir. 1994).

<sup>58</sup> E.g., *Paulsen*, 30 F.3d at 1482, 31 USPQ2d at 1676. (Evidence of commercial success of articles not covered by the claims subject to the 35 U.S.C. § 103 rejection was not probative of nonobviousness).

<sup>59</sup> E.g., *In re Kulling*, 897 F.2d 1147, 1149, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 777 (Fed. Cir. 1983). *In re Soni*, 54 F.3d 746, 34 USPQ2d 1684 (Fed. Cir. 1995) does not change this analysis. In *Soni*, the Court declined to consider the Office's argument that the evidence of non-obviousness was not commensurate in scope with the claim because it had not been raised by the Examiner. 54 F.3d at 751, 34 USPQ2d at 1688.

When considering whether proffered evidence is commensurate in scope with the claimed invention, Office personnel should not require the applicant to show unexpected results over the entire range of properties possessed by a chemical compound or composition.

E.g., *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987). Evidence that the compound or composition possesses superior and unexpected properties in one of a spectrum of common properties can be sufficient to rebut a *prima facie* case of obviousness. *Id.*

For example, a showing of unexpected results for a single member of a claimed subgenus, or a narrow portion of a claimed range would be sufficient to rebut a *prima facie* case of obviousness if a skilled artisan "could ascertain a trend in the exemplified data that would allow him to reasonably extend the probative value thereof." *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980) (Evidence of the unobviousness of a broad range can be proven by a narrower range when one skilled in the art could ascertain a trend that would allow him to reasonably extend the probative value thereof.). But see, *Grasselli*, 713 F.2d at 743, 218 USPQ at 778 (evidence of superior properties for sodium containing composition insufficient to establish the non-obviousness of broad claims for a catalyst with "an alkali metal" where it was well known in the catalyst art that different alkali metals were not interchangeable and applicant had shown unexpected results only for sodium containing materials); *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978)(evidence of superior properties in one species insufficient to establish the nonobviousness of a subgenus containing hundreds of compounds); *In re*

*Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972)(one test not sufficient where there was no adequate basis for concluding the other claimed compounds would behave the same way).

<sup>60</sup> E.g., *Chupp*, 816 F.2d at 646, 2 USPQ2d at 1439; *Clemens*, 622 F.2d at 1036, 206 USPQ at 296.

<sup>61</sup> Usually, a showing of unexpected results is sufficient to overcome a *prima facie* case of obviousness. See, e.g., *In re Albrecht*, 514 F.2d 1389, 1396, 185 USPQ 585, 590 (CCPA 1975). However, where the claims are not limited to a particular use, and where the prior art provides other motivation to select a particular species or subgenus, a showing of a new use may not be sufficient to confer patentability. See *Dillon*, 919 F.2d at 692, 16 USPQ2d at 1900-01.

<sup>62</sup> *Piasecki*, 745 F.2d at 1473, 223 USPQ at 788.

<sup>63</sup> E.g., *Piasecki*, 745 F.2d at 1472-73, 223 USPQ at 788; *In re Eli Lilly & Co.*, 902 F.2d 943, 945, 14 USPQ2d 1741, 1743 (Fed. Cir. 1990).

<sup>64</sup> E.g., *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788; *Eli Lilly*, 902 F.2d at 945, 14 USPQ2d at 1743.

<sup>65</sup> *Dillon*, 919 F.2d at 693, 16 USPQ2d at 1901; *In re Mills*, 916 F.2d 680, 683, 16 USPQ2d 1430, 1433 (Fed. Cir. 1990).

Dated: August 26, 1998.

**Bruce A. Lehman,**

*Assistant Secretary of Commerce and  
Commissioner of Patents and Trademarks.*

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## COMMODITY FUTURES TRADING COMMISSION

### Chicago Mercantile Exchange: Proposed Amendments to the Cash Settlement Provisions of the CME Russian Ruble Futures Contract

**AGENCY:** Commodity Futures Trading Commission.

**ACTION:** Notice of availability of proposed amendments to the terms and conditions of commodity futures contract.

**SUMMARY:** The Chicago Mercantile Exchange (CME or Exchange) has submitted proposed amendments related to the cash settlement provisions of its Russian Ruble futures contract. If the Moscow Interbank Currency Exchange (MICEX) did not determine and/or disseminate a rubles per dollar spot exchange rate on the last day of trading, then, under the proposal, the CME would set the cash settlement price based on the results of its survey of Russian ruble-US dollar interbank market participants used to determine the ruble/dollar exchange rate on that day. The Director of the Division of Economic Analysis (Division) of the Commission, acting pursuant to the

authority delegated by Commission Regulation 140.96, has determined that publication of the proposals for comment is in the public interest, will assist the Commission in considering the views of interested persons, and is consistent with the purpose of the Commodity Exchange Act.

**DATES:** Comments must be received on or before September 8, 1998.

**ADDRESSES:** Interested persons should submit their views and comments to Jean A. Webb, Secretary, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street, NW Washington, DC 20581. In addition, comments may be sent by facsimile transmission to facsimile number (202) 418-5521, or by electronic mail to secretary@cftc.gov. Reference should be made to the amendments to the CME Russian Ruble futures contract.

**FOR FURTHER INFORMATION CONTACT:** Please contact Thomas Leahy of the Division of Economic Analysis, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st Street NW, Washington, 20581, telephone (202) 418-5278. Facsimile number: (202) 418-5527. Electronic mail: tleahy@cftc.gov.

**SUPPLEMENTARY INFORMATION:** Under current rules for the CME ruble futures contract, the cash settlement price is the reciprocal of the spot rate of Russian rubles per US dollar determined by the Moscow Interbank Currency Exchange on the last day of trading. In the event that MICEX does not determine and/or disseminate that spot exchange rate, CME rules provide for the declaration of an emergency pursuant to existing Exchange rule 3025.J.

To preclude an emergency declaration, the Exchange proposes to adopt in its rules, backup procedures that would be used if the MICEX does not determine and/or disseminate the spot rate of Russian rubles per US dollar on the last trading day of the subject contract. The backup cash settlement price would be based on the exchange rate derived from the CME's daily survey of banks. The daily CME survey was initiated on August 28, 1998.

The daily CME survey is conducted as follows. The CME surveys eight reference institutions from a list of at least twelve institutions that are active participants in the market for spot and/or non-deliverable forward markets. At 11:00 a.m. (Moscow time), each randomly selected participant is asked for its perception of the prevailing bid and offer for a typically sized Russian ruble per US dollar spot transaction in the Moscow marketplace. The midpoint of each bid/offer pair is determined, and

the highest two and the lowest two midpoints are eliminated. The remaining four midpoints are averaged and the reciprocal of that average is the daily rate, which could be used as the final settlement price, as noted above.

If the CME is unable to obtain eight responses, but is able to obtain at least five responses, then the CME determines the midpoints of each bid/offer pair and eliminates the highest and the lowest midpoint and average the remaining midpoints. The daily rate, that may be the final settlement price, is the reciprocal of that average. If fewer than five responses are received, then the CME would invoke its emergency provisions.

The CME proposes to implement the changes to the proposed amendments to the cash settlement provisions immediately upon Commission approval for application to all existing and newly listed contracts. The first contract month to which the amendments could apply is the September 1998 contract which expires on September 15, 1998.

The Division requests comment on the proposed changes and implementation plan. The comment period is abbreviated in view of the short time period remaining to the expiration date of the September contract and in view of the recent suspension by MICEX of its daily fixing of the rubles per dollar exchange rate.

Copies of the proposed amendments will be available for inspection at the Office of the Secretariat, Commodity Futures Trading Commission, Three Lafayette Centre, 1155 21st St., NW, Washington, D.C. 20581. Copies of the terms and conditions can be obtained through the Office of the Secretariat by mail at the above address or by phone at (202) 418-5097.

Other materials submitted by the CME may be available upon request pursuant to the Freedom of Information Act (5 U.S.C. 552) and the Commission's regulations thereunder (17 C.F.R. Part 145 (1987)), except to the extent they are entitled to confidential treatment as set forth in 17 C.F.R. 145.5 and 145.9. Requests for copies of such materials should be made to the FOI, Privacy and Sunshine Act Compliance Staff of the Office of the Secretariat at the Commission's headquarters in accordance with 17 C.F.R. 145.7 and 145.8.

Any person interested in submitting written data, views, or arguments on the proposed amendments, or with respect to other materials submitted by the CME, should send such comments to Jean A. Webb, Secretary, Commodity Futures Trading Commission, Three