**Slip Op. 05-27**

**UNITED STATES COURT OF INTERNATIONAL TRADE**

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| **USR OPTONIX, INC.,**<br><br>Plaintiff,<br><br>v.<br><br>**UNITED STATES,**<br><br>Defendant. | **Court No. 98-08-02723**<br><br>**Before: Judge Timothy C. Stanceu** |

[Plaintiff's motion for summary judgment denied; defendant's cross-motion for summary judgment granted in part and denied in part]

Decided: February 18, 2005

*Neville Peterson LLP* (*John M. Peterson* and *Curtis W. Knauss*) for plaintiff.

*Peter D. Keisler*, Assistant Attorney General, *Barbara S. Williams*, Attorney in Charge, International Trade Field Office, and *James A. Curley*, Trial Attorney, Commercial Litigation Branch, Civil Division, United States Department of Justice; *Beth C. Brotman*, Office of Assistant Chief Counsel, United States Bureau of Customs and Border Protection, of Counsel, for defendant.

## OPINION AND ORDER

**STANCEU, Judge**:

Plaintiff USR Optonix, Inc. ("Optonix") challenges the determinations of tariff classification that the United States Customs Service ("Customs") applied to two products imported during a period beginning in November 1994 and concluding in May 1997.[1] Optonix moves for summary judgment with respect to the classification of both products; defendant

[1] The U.S. Customs Service now is renamed as the Bureau of Customs and Border Protection. *See Homeland Security Act of 2002*, Pub. L. 107-296, § 1502, 116 Stat. 2135 (2002); Reorg. Plan for the Dep't of Homeland Security, H.R. Doc. No. 108-32 (2003).

United States cross-moves for summary judgment in its favor, also with respect to both products. The court exercises jurisdiction pursuant to 28 U.S.C. § 1581(a) (2000).

The first product at issue, designated as "P22-RE1," is a white powder consisting by weight of at least 99 percent yttrium oxide ($Y_2O_3$). The remaining 1 percent or less of the product consists of europium oxide. The product is represented by the formula "$Y_2O_3$:Eu" and also is identified as "Yttrium Oxide: Europium Doped." The second product, "P22-HCR2," is a red powder comprised by weight of at least 90 percent yttrium oxygen sulfide ($Y_2O_2S$), 10 percent or less europium oxygen sulfide ($Eu_2O_2S$), and 1 percent or less ferrous oxide ($Fe_2O_3$). Each product is used as a material in the production of phosphorescent coatings that are applied in the manufacturing of cathode ray tubes.

The court awards summary judgment to defendant on the issue of the tariff classification of P22-RE1. The court concludes that there are no genuine issues of fact material to that tariff classification and that the tariff classification determined by Customs was correct, entitling defendant to judgment as a matter of law. The motions of both parties for summary judgment on the tariff classification of P22-HCR2 are denied because of the existence of one or more genuine issues of material fact.

## I. BACKGROUND

Upon liquidation, Customs classified the entries of P22-RE1 that were made prior to 1995 in subheading 2846.90.50, Harmonized Tariff Schedule of the United States ("HTSUS"), subject to duty at 3.7 percent *ad valorem*. The version of the provision that was in effect at the time of the pre-1995 entries of P22-RE1 read as follows:

2846 Compounds, inorganic or organic, of rare-earth metals, of yttrium or of scandium, or of mixtures of these metals:

* * *

2846.90 Other:

* * *

2846.90.50 Other. . . . . 3.7%.

Customs classified entries of P22-RE1 made in 1995 and thereafter in subheading 2846.90.80, HTSUS, the provision that superceded the former subheading 2846.90.50, HTSUS. The article description for heading 2846 and the duty applicable to the subheading at issue, 3.7 percent *ad valorem*, remained unchanged.

Upon liquidation, Customs classified entries of P22-HCR2 in subheading 3206.50.00, HTSUS. At the time the entries were made, this tariff provision read, in relevant part, as follows:

3206 . . . inorganic products of a kind used as luminophores, whether or not chemically defined:

* * *

3206.50.00 Inorganic products of a kind used as luminophores. . . . . .10.0%

HTSUS, 1994.[2]

Plaintiff protested the classification determinations that Customs made upon liquidation. Following denial of the protests, plaintiff commenced this action.

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[2] During the time plaintiff imported the subject entries, the duty rate was reduced in stages, as follows: 1995, 9.3%; 1996, 8.6%; 1997, 7.9%.

A. Contentions of the Parties on the Classification of P22-RE1

Defendant maintains that Customs was correct in determining upon liquidation to classify P22-RE1 in subheading 2846.90.50, HTSUS, and subsequently in subheading 2846.90.80, HTSUS. In challenging that determination, plaintiff's principal argument is that P22-RE1 is excluded from the scope of heading 2846 because it is a mixture of two compounds (*i.e.,* yttrium oxide and europium oxide) and therefore is not itself a "compound" within the meaning of the article description for the heading ("Compounds, inorganic or organic, of rare-earth metals, of yttrium or of scandium, or of mixtures of these metals"). On the basis of this assertion, plaintiff advocates classification in subheading 3824.90.39, HTSUS, free of duty. That provision pertains to "mixtures of two or more inorganic compounds"; the superior heading (heading 3824, HTSUS) is a "basket" heading that includes, *inter alia*, "chemical products and preparations of the chemical or allied industries . . . not elsewhere specified or included."

Plaintiff claims an alternative classification in subheading 2846.90.20, HTSUS, the article description for which is "[m]ixtures of rare-earth oxides or of rare-earth chlorides." Plaintiff argues that, should the court determine that P22-RE1 falls within the scope of heading 2846, the court should rule that P22-RE1 is classified in subheading 2846.90.20 based on its assertion that both yttrium oxide and europium oxide are rare-earth oxides.

Defendant argues that P22-RE1 is correctly classified in subheading 2846.90.80, HTSUS, (and in the predecessor subheading 2846.90.50, HTSUS, prior to 1995) because heading 2846, in defendant's view, includes mixtures of oxides of yttrium and europium. As confirmation that the scope of the heading includes mixtures as well as compounds, defendant points to the article description for another eight-digit subheading within the heading, subheading 2846.90.20,

HTSUS, which, as noted above, reads "[m]ixtures of rare-earth oxides or of rare-earth chlorides." Defendant also directs the court's attention to Explanatory Note 32.06, which contains a reference identifying headings 2843 to 2846 as appropriate for the classification of a mixture of yttrium oxide and europium oxide. Further, defendant points to the first paragraph of Explanatory Note 28.46 in support of its contention that heading 2846 includes mixtures of oxides of the metals mentioned in the article description for the heading; plaintiff relies on this same paragraph to support its argument that mixtures such as P22-RE1 are excluded from heading 2846 because they are not "compounds of mixtures" but instead are mixtures of compounds made intentionally for special purposes.

Concerning plaintiff's alternative classification of subheading 2846.90.20, HTSUS, which pertains to "mixtures of rare-earth oxides," defendant contends that yttrium is not a rare-earth metal for tariff classification purposes and, consequently, that yttrium oxide is not a rare-earth oxide within the meaning of subheading 2846.90.20, HTSUS.

B. Contentions of the Parties on the Classification of P22-HCR2

Plaintiff argues that P22-HCR2 is not classifiable in subheading 3206.50.00, HTSUS, ("Inorganic products of a kind used as luminophores") because it is not a finished product capable of use as a luminophore in the condition in which it is imported. Plaintiff asserts that the product requires further processing consisting of reduction of particle size and blending with other products to obtain the characteristics desired by the manufacturer of the cathode ray tube. Plaintiff submits that the correct classification is subheading 3824.90.39, HTSUS, which is free of duty. As noted previously, that subheading pertains to "mixtures of two or more inorganic compounds," with the superior heading pertaining to "chemical products and preparations of the

chemical or allied industries . . . not elsewhere specified or included." At an early point in this litigation, plaintiff argued in the alternative that P22-HCR2 should be classified in subheading 2846.90.20, HTSUS ("mixtures of rare-earth oxides. . .").

Defendant responds that P22-HCR2 falls within the definition of "inorganic products of a kind used as luminophores" despite the further processing alleged by plaintiff to be required. In rebuttal of plaintiff's argument for alternative classification in subheading 2846.90.20, HTSUS ("mixtures of rare-earth oxides"), defendant maintains that the product is excluded from that provision because it is not comprised of a mixture of oxides of rare-earth metals.

## II. APPLICABLE LEGAL STANDARDS

### A. Standard of Review

The court proceeds *de novo* in actions brought to contest the denial of a protest under section 515 of the Tariff Act of 1930. *See* 28 U.S.C. § 2640(a)(1). In a classification action, plaintiff has the burden of establishing that the government's classification of the product was incorrect but does not bear a burden of establishing the correct tariff classification; instead, the correct tariff classification is to be determined by the court. *See Jarvis Clark Co. v. United States*, 733 F.2d 873, 878, *reh'g denied*, 739 F.2d 628 (Fed. Cir. 1984).

Customs classification decisions are entitled to a presumption of correctness by 28 U.S.C. § 2639(a)(1), but the presumption does not apply if the court is presented with a question of law by a proper motion for summary judgment. *See Universal Elecs., Inc. v. United States*, 112 F.3d 488, 492 (Fed. Cir. 1997). The court affords deference to a classification decision by Customs to the extent that the decision has the power to persuade. *See United States v. Mead Corp.*, 533 U.S. 218, 235 (2001); *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944).

B. The General Rules of Interpretation and the Explanatory Notes

The General Rules of Interpretation, HTSUS, govern the determination of tariff classification. *See N. Am. Processing Co. v. United States*, 236 F.3d 695, 698 (Fed. Cir. 2001). General Rule of Interpretation ("GRI") 1, HTSUS, requires that tariff classification, in the first instance, "be determined according to the terms of the headings and any relative section or chapter notes." GRI 1, HTSUS. GRIs 2 through 5 apply "provided such headings or notes do not otherwise require." *Id*.

For guidance as to the scope and meaning of tariff terms, the court may resort to the Explanatory Notes, which, although not part of U.S. law, are "indicative of [the] proper interpretation" of the tariff schedule. *Lynteq, Inc. v. United States*, 976 F.2d 693, 699 (Fed. Cir. 1992), *quoting* H.R. Conf. Rep. No. 100-576, 100th Cong., 2d Sess. 549 (1988), *reprinted in* 1988 U.S.C.C.A.N. 1547, 1582.

## III. DISCUSSION

A. Absence of a Genuine Issue of Material Fact Concerning the Tariff Classification of P22-RE1

Under USCIT Rule 56, summary judgment is appropriate when the parties' submissions "show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." USCIT Rule 56(c). The parties agree that P22-RE1 consists by weight of at least 99 percent yttrium oxide ($Y_2O_3$), a fact corroborated by the Material Safety Data Sheet ("MSDS") prepared by the manufacturer, Kasei Optonix, Ltd. of Tokyo, Japan. As specified by the MSDS and as stated in an affidavit by plaintiff's Technical Director, Mr. Susumu Omatoi, P22-RE1 is represented by the formula "$Y_2O_3$:Eu." According to that affidavit, P22-RE1 is identified by the name "Yttrium Oxide: Europium Doped."

In its Rule 56 *Statement of Material Facts Not in Dispute*, plaintiff asserted that P22-RE1 is a mixture of yttrium oxide and europium oxide, manufactured by separately producing the yttrium oxide and europium oxide components, intentionally blending them in specific quantities, and mixing them by heating in a kiln at high temperatures. *See Pl.'s Statement of Material Facts Not in Dispute* ¶ 8. In the pleadings, defendant denied this assertion but did not allege facts to the contrary. In its *Statement in Response to Plaintiff's Statement of Material Facts*, defendant admitted "that P22-RE1 consists of a mixture of yttrium oxide with smaller amounts of europium oxide." *Def.'s Resp. to Pl.'s Statement of Material Facts* ¶ 7. In the *Statement of Material Facts Not in Dispute* that it filed in support of its cross-motion for summary judgment, defendant stated that "P22-RE1 consists, by weight, of 99 percent or more yttrium oxide, and 1 percent or less europium oxide." *Def.'s Statement of Material Facts Not in Dispute* ¶ 1.

Although defendant initially agreed with plaintiff that P22-RE1 is a "mixture of compounds" and not a "compound of mixtures," defendant in its post-argument brief advanced an alternative argument in favor of its classification position; in this alternative argument defendant departed in two respects from its earlier admissions concerning the composition of P22-RE1. In presenting this alternative argument, defendant regarded P22-RE1 as a "compound" instead of a "mixture." Further, defendant asserted that the product consists of yttrium oxide and europium, rather than consisting of yttrium oxide and europium oxide.

Despite defendant's conflicting viewpoints, and the apparent disagreement with plaintiff, on the composition of P22-RE1, the court finds that there is no genuine issue of fact material to the tariff classification of P22-RE1, for two reasons. First, much of the apparent factual

disagreement, to the extent it is relevant to the classification issue presented, is resolved by assigning the proper meaning to the term "compounds" as used in the article description for heading 2846. That meaning is a question of law, not of fact. *See David W. Shenk & Co. v. United States*, 21 CIT 284, 286, 960 F. Supp. 363, 365 (1997). As discussed in the next section, the court concludes that in using the term "compounds" in the heading, Congress did not intend this term and the term "mixtures," which is used in a subheading of the heading, to be read as mutually exclusive. Instead, the term "compounds," as used in the heading, is properly understood to be broader than such terms as "chemical compounds" or "separate chemically defined compounds" and to include some products that also are described by the term "mixtures." [3] Second, the parties agree that P22-RE1 consists by weight of at least 99 percent yttrium oxide. The remainder, which is one percent or less by weight, either consists of europium oxide, as plaintiff contends and as defendant initially admitted, or, as defendant subsequently asserted based on its interpretation of the MSDS for P22-REI, consists of europium. This factual distinction is not material to the issue of classification of P22-RE1, because, in either case, the correct classification for P22-RE1 is subheading 2846.90.80, HTSUS (or, for entries prior to 1995, subheading 2846.90.50, HTSUS), for the reasons discussed later in this opinion.

The court notes, in passing, that defendant has not asserted new facts to establish either that P22-RE1 is a "compound," however defined, or that the product contains europium rather than europium oxide. Instead, these two contentions by defendant appear to be based on

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[3] The term "chemical compound" usually refers to "a substance composed chemically of two or more elements in definite proportions (as opposed to a *mixture*)." *Oxford English Dictionary*, 629, vol. III (2d ed. 1989).

inferences it draws from information already on the record, specifically, information presented in the MSDS for P22-RE1. Defendant draws these inferences from its submissions of affidavits by Mr. Larry D. Fluty, a Senior Science Officer in the Office of Laboratory and Scientific Services, Bureau of Customs and Border Protection, particularly a statement by Mr. Fluty that products similar to P22-RE1 (but not necessarily P22-RE1 itself) consist of "compounds" in which europium atoms are bound to oxygen atoms, replacing yttrium atoms in a yttrium oxide crystal lattice.

Defendant presented two affidavits of Mr. Fluty that address P22-RE1. In the first affidavit, Mr. Fluty had stated that "[t]his combination of yttrium oxide and europium oxide is a mixture described by the Explanatory Notes to Heading 2846." *First Fluty Decl*. ¶ 9 (Sep. 11, 2002). In that same affidavit, Mr. Fluty, in referring to the term "compounds . . . of mixtures of these metals" as used in heading 2846, stated that "it is possible to have mixtures of compounds but not compounds of mixtures." *Id.* ¶ 6. Citing to that statement by Mr. Fluty, defendant in its brief supporting its cross-motion for summary judgment argued that "[t]he language of heading 2846, 'compounds . . . of mixtures,' moreover, is meaningless from a technical point of view. . . . To make sense out of the language, it must be understood, insofar as relevant here, as providing for mixtures that have as ingredients the compounds named in the heading, *i.e.*, compounds of rare earth metals and compounds of yttrium." *Def.'s Br. in Opp'n to Pl.'s Mot. for Summ. J., & Cross-Mot. for Summ. J*. at 7 n.2. In short, defendant argued at that time that "compounds of mixtures" is the equivalent, in the context of the heading, of "mixtures of compounds."

In his second affidavit on P22-RE1, Mr. Fluty described products similar to P22-RE1 as products in which a europium atom replaces a yttrium atom in a crystal lattice consisting of the

yttrium oxide. Mr. Fluty pointed out that the MSDS for P22-RE1 states as follows: "Classification if single or mixed: Single Product." He further stated in his affidavit his opinion that the chemical formula stated in the MSDS, $Y_2O_3$:Eu, "means yttrium oxide containing an indeterminate amount of europium" and that this formula "indicates that the product should be considered a single chemical compound." *Second Fluty Decl*. ¶ 13 (Mar. 17, 2004). In its post-argument brief, defendant maintained its position that heading 2846 encompasses mixtures within its scope but, on the basis of the second affidavit of Mr. Fluty, contended in the alternative "that if the Court determines that Heading 2846 covers only compounds, and not mixtures of compounds, then P22-RE1 was correctly classified there because it is a single compound consisting of yttrium oxide and europium." *Def.'s Br. in Reply to Pl.'s Post-Argument. Br.* at 6.

In stating that the remainder is "europium," defendant has not disputed that the remaining europium may exist in the product in the form of europium oxide and has not offered to prove any facts relevant to this question. Defendant has not attempted to show how europium, which is regarded as having an extremely high affinity for oxygen, could exist in its metallic form, *i.e.*, as a separate element, within a powdered mixture rather than being present in the mixture in the form of europium oxide. Rather, defendant's reference to the remainder being "europium" appears to be related to its argument that "if the Court determines that Heading 2846 covers only compounds, and not mixtures of compounds, then P22-RE1 was correctly classified there because it is a single compound consisting of yttrium oxide and europium." Defendant's contention apparently refers in part to the aforementioned statement, set forth in paragraph 14 of Mr. Fluty's second affidavit on P22-RE1, to the effect that products such as P22-RE1 typically

have a "single phase" chemical structure consisting of yttrium oxide and europium bound together in a crystal lattice, in which europium atoms replace yttrium atoms in the crystal lattice. Mr. Fluty's statement, however, appears to avoid making any direct statement that P22-RE1 actually consists of such a crystal lattice.

As discussed *infra*, the uncontested facts are sufficient to establish that P22-RE1 does not conform with established definitions of the terms "chemical compound" or "separate chemically defined compound" but also are sufficient to establish that P22-RE1 is a "compound" within the scope of the term "compounds" as used in heading 2846. It is immaterial to this conclusion whether the portion of the product not consisting of yttrium oxide consists of europium or europium oxide. Nor does the classification within heading 2846 depend on whether europium atoms are bound to oxygen atoms, replacing an indefinite number of yttrium atoms within a yttrium oxide crystal lattice. Because there is no genuine issue of fact that is material to the classification of P22-RE1, the court concludes that summary judgment is the appropriate disposition of the classification issue plaintiff has raised with respect to this product.

B. P22-RE1 Is Classified under Heading 2846, HTSUS

In the various pleadings, the parties have identified two headings as relevant to the classification issue presented by P22-RE1. They are heading 2846, HTSUS, ("Compounds, inorganic or organic, of rare-earth metals, of yttrium or of scandium, or of mixtures of these metals") and heading 3824, HTSUS ("chemical products and preparations of the chemical and allied industries . . . not elsewhere specified or included"). The court has considered both of these headings and heading 3206, HTSUS, to which the parties also have referred in this case. The latter heading includes within its scope "inorganic products of a kind used as luminophores,

whether or not chemically defined." Neither the court nor the parties have identified any other heading of the HTSUS that merits consideration.

The court concludes that, by application of GRI 1, P22-RE1 is correctly classified under heading 2846, HTSUS. The court reaches this conclusion for the following reasons: (1) Heading 3824 is excluded from consideration if P22-RE1 is elsewhere specified or included or if it answers to descriptions in heading 2843 or 2846; (2) Heading 3206 is excluded from consideration by the terms of that heading, as construed according to guidance in the relevant Explanatory Note; and (3) P22-RE1 answers to a description in, and is included in, heading 2846, because it is described by a term of that heading, "compounds . . . of mixtures of these metals," with "these metals" referring to rare-earth metals, yttrium, and scandium. In the discussion below, the court discusses in further detail the reasoning underlying its conclusions concerning the tariff classification of P22-RE1.

1. Heading 3824 Applies Only if P22-RE1 Is Not Elsewhere Specified or Included

Because heading 3824, HTSUS, contains the qualifying term "not elsewhere specified or included," GRI 1 precludes classification of P22-RE1 under heading 3824 if P22-RE1 is described by heading 2846 or heading 3206. The same conclusion emerges from the application of Note 1(b) to Section VI, HTSUS, which provides in relevant part that "goods answering to a description in heading 2843 or 2846 are to be classified in those headings and in no other heading of this section." Headings 3824 and 3206, like heading 2846, are in Section VI of the HTSUS. Accordingly, the issue presented is whether P22-RE1 falls within the scope of either heading 2846 or heading 3206, HTSUS.

2. Heading 3206 Does Not Include Mixtures of Yttrium Oxide and Europium Oxide

The court concludes that P22-RE1 is not properly classified under heading 3206. The Explanatory Notes offer relevant guidance on the intended scope of heading 3206 and its relationship to the intended scope of heading 2846. Explanatory Note 32.06 states that "[t]he heading [*i.e.,* 3206] **does not cover** products answering to descriptions in **headings 28.43 to 28.46** (e.g., a mixture of yttrium oxide and europium oxide), however put up and whatever their intended use." EN 32.06 (emphasis in original). The parenthetical example used to identify the group of products excluded from heading 3206 and falling within headings 2843 to 2846 describes by composition a product identical or highly similar to P22-RE1. Thus, Explanatory Note 32.06 clarifies that a class of products to which P22-RE1 appears to belong, *i.e.,* those products consisting of a mixture of yttrium oxide and europium oxide, should not be classified under heading 3206, regardless whether they are of a kind used as luminophores.

3. P22-RE1 Answers to a Description in Heading 2846 and Is Included Therein

Explanatory Note 32.06 also provides guidance on whether P22-RE1 may be classified under heading 2846. The "mixture of yttrium oxide and europium oxide" chosen as an example by Explanatory Note 32.06 is intended not only to direct the reader away from heading 3206, but also to refer the reader to classification under heading 2846. Implicit in the Note is that a mixture of yttrium oxide and europium oxide answers to a description in the group of headings consisting of headings 2843, 2844, 2845, and 2846. However, headings 2843 through 2845 refer to classes of goods that differ considerably from mixtures of yttrium oxide and europium oxide. Heading 2843 pertains generally to precious metals, heading 2844 addresses radioactive elements and compounds, and heading 2845 is confined to isotopes and compounds thereof.

Explanatory Note 32.06, therefore, lends strong support to defendant's position that P22-RE1 is properly classified under heading 2846. However, the terms of that heading, as interpreted according to their plain meaning and according to guidance contained elsewhere in the Explanatory Notes and specifically in Explanatory Note 28.46, raise an additional issue requiring the court to consider the matter further. That issue is whether, as plaintiff contends, P22-RE1 is excluded from heading 2846 because the heading contains terms that, in pertinent part, confine the scope to "[c]ompounds . . . of rare-earth metals, of yttrium . . . , or of mixtures of these metals." Plaintiff argues, *inter alia*, that P22-RE1 is not a compound within the meaning of the heading.

The threshold issue presented is the meaning of the term "compounds" as used in heading 2846. The term "separate chemically defined compounds" is used elsewhere in the HTSUS, which in note 1(a) to chapter 28 expresses the general rule that chapter 28 is confined to "separate chemical elements" and "separate chemically defined compounds." [4] Under note 1(a) to chapter 28, HTSUS, this general rule applies "[e]xcept where the context otherwise requires." The General Explanatory Note to Chapter 28 defines the term "separate chemically defined compound" as follows: "A separate chemically defined compound is a substance which consists of one molecular species (e.g., covalent or ionic) whose composition is defined by a constant ratio of elements and can be represented by a definitive structural diagram. In a crystal lattice, the molecular species corresponds to the repeating unit cell." The Note further explains that "[t]he elements of a separate chemically defined compound combine in a specific characteristic

[4] Note 1(a) to ch. 28, HTSUS ("Except where the context otherwise requires, the headings of this chapter apply only to: . . . separate chemical elements and separate chemically defined compounds, whether or not containing impurities.").

proportion determined by the valency and the bonding requirements of the individual atoms. The proportion of each element is constant and specific to each compound and it is therefore said to be stoichiometric."

P22-RE1 does not conform to the Explanatory Note definition of a "separate chemically defined compound." As defendant acknowledges in citing Mr. Fluty's second affidavit, the chemical formula for P22-RE1, $Y_2O_3$:Eu, "means yttrium oxide containing an indeterminate amount of europium." As demonstrated by the chemical formula, the europium or europium oxide is not present within P22-RE1 in a specific or characteristic proportion that is determined by the valency and bonding requirements of the individual atoms of yttrium and oxygen that comprise the portion of the product that consists of yttrium oxide, which itself is a separate chemically defined compound. P22-RE1, therefore, is not stoichiometric. The proportion of europium or europium oxide is not chemically defined by molecular structure and instead is described as being present in the overall product only according to a range, *i.e.*, at a level of one percent or less by weight. Even if, as defendant suggests, P22-RE1 is a single-phase product consisting of a yttrium oxide crystal lattice, with an indeterminate but small number of europium atoms replacing yttrium atoms within that lattice, the product still would fall outside the Explanatory Note definition of the term "separate chemically defined compound." In the latter, "the molecular species corresponds to the repeating unit cell." General Explanatory Note to Chapter 28. The HTSUS also uses the term "compounds, whether or not chemically defined." [5] Heading 2846 refers to "compounds" without specifying whether the term is intended to refer to

[5] *E.g.*, Note 6(c) to chapter 28, HTSUS, uses the term "compounds . . . whether or not chemically defined" ("Heading 2844 applies only to: . . . Compounds, inorganic or organic, of these elements or isotopes, whether or not chemically defined.").

"separate chemically defined compounds" or, alternatively, to "compounds, whether or not chemically defined."

The court concludes that the term "compounds" as used in heading 2846 is intended to have a broader meaning than the more specific term "separate chemically defined compounds" and is intended to include certain products that also could be described as "mixtures," which term commonly would include within its scope products consisting of two or more separate chemically defined compounds.[6] One indication of this intent is the General Explanatory Note to Chapter 28, which instructs that heading 2846 is one of the specified exceptions to the general rule that Chapter 28 is confined to chemical elements and separate chemically defined compounds.[7] Another indication of this intent is the inclusion within the heading of subheading 2846.90.20, HTSUS, the article description for which is "[m]ixtures of rare-earth oxides or of rare-earth chlorides." A third indication is the first paragraph of Explanatory Note 28.46, which indicates that the heading includes at least some products that can be described as "mixtures of oxides or hydroxides of these elements," with "these elements" referring to yttrium, scandium, and the rare-earth metals. Therefore, the term "compounds" as used in heading 2846 cannot

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[6] The term "mixture" is defined as "[a]n aggregate composed of two or more distinct chemical components which retain their identities regardless of the degree to which they have become mingled." *McGraw-Hill Encyclopedia of Chemistry*, 607 (5th ed. 1983).

[7] The General Explanatory Note states that "[t]here are certain exceptions to the rule that this Chapter is limited to separate chemical elements and separate chemically defined compounds." The Note then lists specific products falling within the exception, including: "Heading 28.46 - Compounds, inorganic or organic, of rare-earth metals, of yttrium or of scandium or of mixtures of these metals."

properly be interpreted to mean "separate chemically defined compounds," and it must be read to encompass some products that also may be described as "mixtures." [8]

Plaintiff has pointed to this same provision of the Explanatory Notes, *i.e.*, the first paragraph of Explanatory Note 28.46, in contending that the scope of heading 2846 is too narrow to encompass P22-RE1. Optonix relies on this paragraph and on the term "compounds" in the heading for its argument that "mixtures consisting of two or more compounds, made intentionally for special purposes, are expressly excluded from Heading 2846," and that P22-RE1 is such a mixture. *Pl.'s Post-Argument Br.* at 3. The paragraph at issue reads as follows:

> This heading [*i.e.*, heading 28.46] covers the inorganic or organic compounds of yttrium, of scandium or of the rare-earth metals of heading 28.05 (lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium). The heading also covers compounds derived directly by chemical treatment from mixtures of the elements. This means that the heading will include mixtures of oxides or hydroxides of these elements or mixtures of salts having the same anion (e.g., rare-earth metal chlorides), but not mixtures of salts having different anions, whether or not the cation is the same. The heading will not therefore, for example, cover a mixture of europium and samarium nitrates with the oxalates nor a mixture of cerium chloride and cerium sulphate since these examples are not compounds derived directly from mixtures of elements, but are mixtures of compounds which could be conceived as having been made intentionally for special purposes and which, accordingly, fall in **heading 38.24**.

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[8] A broader definition of the word "compounds" is consistent with a common meaning of the term found among dictionary definitions. The *Merriam-Webster Collegiate Dictionary*, 236 (10th ed. 2002), defines "compound" as "something formed by a union of elements or parts." The *Oxford English Dictionary*, 629, vol. III (2d ed. 1989), in the relevant part, defines "compound" as "[a] union, combination, or mixture of elements." In turn, the *Oxford English Dictionary* includes a definition of "element" as "[a] component part of a complex whole," a definition broader in scope than the chemical definition of the term "element." *Id.* at 130, vol. V.

EN 28.46 (emphasis in original). Under the interpretation of the paragraph advanced by plaintiff, the clause "the heading will include mixtures of oxides . . . of these elements" is qualified by the preceding sentence such that the only mixtures of yttrium oxide and europium oxide that fall within the scope of heading 2846 are those that are "derived directly by chemical treatment from mixtures of these elements." Plaintiff construes the latter phrase, when read together with the later reference in the paragraph to "mixtures of compounds which could be conceived as having been made intentionally for special purposes," to mean that a product obtained by intentionally mixing yttrium oxide and europium oxide for a special purpose is excluded from the scope of the heading and is not described by the term in the heading, "compounds . . . of mixtures of these metals." Plaintiff's interpretation of Explanatory Note 28.46 is that P22-RE1 is described by the term "mixtures of compounds" as used in the last sentence of the above-quoted paragraph from Explanatory Note 28.46 and thus is to be distinguished from what plaintiff views as the relevant term in heading 2846, which is "compounds . . . of mixtures of these metals."

The court does not agree with the meaning plaintiff ascribes to the first paragraph of Explanatory Note 28.46. Under plaintiff's construction of the paragraph, mixtures of oxides of the metals of heading 2805 (which metals include yttrium and the rare-earth metals) would be excluded from heading 2846 if two such oxides were produced separately and blended intentionally for a special purpose. The reference in the second sentence, "compounds derived directly by chemical treatment from mixtures of these elements," may be susceptible to more than one meaning when viewed standing alone, but its meaning, to the extent it is relevant to the issue presented by P22-RE1, is clarified by the following sentence. That third sentence, which is

introduced with the words "[t]his means that," directly states that mixtures of oxides of the metals in question fall within heading 2846. Plaintiff's interpretation would require the court to interpret the third sentence to mean that some, but not all, mixtures of oxides of the subject metals are within the heading, an interpretation that appears to be at odds with the plain meaning of that sentence. Moreover, it would be incongruous to ascribe to the word "compounds," as used in the second sentence of the paragraph, a narrow meaning such as "separate chemically defined compounds" and at the same time ascribe to the term "compounds" as used in the heading the broader meaning that is required by the context and is clarified by other provisions of the Explanatory Notes.

Plaintiff's interpretation of the first paragraph of Explanatory Note 28.46 would seek to introduce ambiguity into the third sentence of the paragraph by resort to the last sentence in the paragraph, which contains a reference to "mixtures of compounds which could be conceived as having been made intentionally for special purposes." The context of the last sentence, however, is the issue of which mixtures of salts fall within the heading and which do not; the last sentence, therefore, addresses an issue not relevant to the classification of P22-RE1, which is a mixture of oxides, not a mixture of salts. Even if considered relevant to the issue of classification of P22-RE1, the last sentence would present a problem when viewed against plaintiff's premise that any mixture of compounds made intentionally for a special purpose is excluded from the heading. That problem is the contradiction that would arise in the instance of a mixture of salts, made intentionally for a special purpose, in which each salt has the same anion but a different cation. The contradiction does not arise when the paragraph is construed to establish a clear dividing line that would place such a mixture within the heading and exclude another mixture of

salts, each of which had different anions, whether or not made intentionally for a special purpose.

For these several reasons, plaintiff's interpretation of the first paragraph of Explanatory Note 28.46 creates difficulties and internal conflicts that it is unable to resolve. Plaintiff's interpretation of that paragraph also would appear to create a conflict with the express language of Explanatory Note 32.06, which directs the reader to heading 2846 to ascertain the classification of "a mixture of yttrium oxide and europium oxide" and does so without making an exception for the case of a mixture of yttrium oxide and europium oxide that is made by combining the two oxides intentionally for a special purpose.

Plaintiff's Technical Director, in his affidavit, described P22-RE1 as "Yttrium Oxide: Europium Doped." [9] That the parties have not established whether the europium is bound in the structure of the crystal lattice of the yttrium oxide or is in the form of europium oxide mixed together with yttrium oxide is not a material fact because P22-RE1 would be classified under heading 2846 in either case. As discussed previously, the term "compounds" as used in heading

[9] The use of the term "Yttrium Oxide: Europium Doped" in the affidavit of plaintiff's Technical Director, Mr. Omatoi, to describe P22-RE1 suggests that the product could be shown to be identified in commerce as a "compound" (broadly defined) of yttrium (in this case, yttrium oxide), such that it would fall squarely within the terms of heading 2846. Under such an argument, regardless of whether the europium is present in the P22-RE1 as europium oxide that is mixed with yttrium oxide, or is present as europium atoms bound to oxygen atoms within the structure of a crystal lattice, that presence in a small quantity by weight would not prevent the product from conforming to a commercial definition of the term "yttrium oxide." *See Rohm & Haas Co. v. United States*, 5 CIT 218, 225, 568 F. Supp. 751, 756 (1983) ("Congress is presumed to know the language of commerce, and to have framed tariff acts so as to classify commodities according to the general usage and denomination of the trade."). Defendant did not develop this argument or support it with additional evidence of such a commercial designation; therefore, the court does not have before it evidence sufficient to establish that the product is considered to be a form of yttrium oxide for commercial purposes.

2846 is not limited to "chemical compounds," "stoichiometric compounds," or "separate chemically defined compounds." Various provisions of the Explanatory Notes, as well as the article description for subheading 2846.90.20 ("Mixtures of rare-earth oxides or of rare-earth chlorides") clarify that the term "compounds" as used in heading 2846 includes some products that also fall within definitions of the term "mixtures." If the europium is bound in the crystal lattice of the yttrium oxide compound, albeit in a non-stoichiometric proportion, P22-RE1 would be considered a "compound" of yttrium under some definitions of "non-stoichiometric compounds." [10]

If P22-RE1 is actually a mixture of two separate chemically-defined compounds, yttrium oxide and europium oxide (as the parties initially appeared to agree), it nevertheless would fall within the scope of heading 2846, because the proper interpretation of the term "compounds" as used in the heading is sufficiently broad to include this product. Explanatory Note 28.46 states that P22-RE1 is covered by heading 2846 because this "heading also covers compounds derived directly by chemical treatment from mixtures of these elements. This means that the heading will include mixtures of oxides or hydroxides of these elements . . . ." Yttrium oxide and europium oxide in mixture form plainly would be described as "mixtures of oxides . . . of these

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[10] P22-RE1, if consisting of a single "crystal lattice" structure as described by defendant, possibly could conform to definitions of "non-stoichiometric compounds" as found in scientific references. For example, *McGraw-Hill Encyclopedia of Chemistry* defines "nonstoichiometric compounds" as "[c]hemical compounds in which the relative number of atoms is not expressible as the ratio of small whole numbers . . . . Nonstoichiometry is a property of the solid state and arises because a fraction of the atoms of a given kind may be (1) missing from the regular structure . . . (2) present in excess over the requirements of the structure . . . or (3) substituted by atoms of another kind . . . ." *McGraw-Hill Encyclopedia of Chemistry* at 665. The *McGraw-Hill Encyclopedia of Chemistry* further states that nonstoichiometry "is also well represented in the so-called insertion or intercalation compounds, in which a metallic element or neutral molecule has been inserted in a stoichiometric host."

elements." As noted above, Explanatory Note 32.06 also indicates that a mixture of yttrium oxide and europium oxide should be classified under heading 2846.

For these reasons, the court concludes that the terms of heading 2846, considered in the proper context of related provisions of the HTSUS and as informed by the guidance in the Explanatory Notes, encompass P22-RE1. Those terms describe P22-RE1 whether europium exists in the product as atoms of europium metal bound into a crystal lattice formed by yttrium oxide or whether the product contains, within a mixture, the separate chemically defined compound europium oxide.

C. P22-RE1 Is Classified in Subheading 2846.90.80, HTSUS

The court concludes that Customs was correct in classifying P22-RE1 in subheading 2846.90.80, HTSUS (and, prior to 1995, in the predecessor provision, subheading 2846.90.50, HTSUS). Plaintiff's alternative classification of subheading 2846.90.20, HTSUS, which pertains to "mixtures of rare earth oxides . . . ," is incorrect because yttrium oxide is not a "rare-earth oxide" within the meaning of that term as used in subheading 2846.90.20, HTSUS.

As plaintiff has pointed out, some technical references list yttrium among the rare-earth elements or otherwise indicate that yttrium oxide is a rare-earth oxide. Plaintiff has identified two such authorities, the *CRC Handbook of Chemistry and Physics* and *The Phosphor Handbook*.[11] However, the court disagrees with plaintiff's contention that the term "rare-earth oxides" as used in subheading 2846.90.20, HTSUS, includes yttrium oxide.

[11] *CRC Handbook of Chemistry and Physics*, §§ 4-114, 4-115 (77th ed. 1996-97); *The Phosphor Handbook* at 178, 179 (Shingeo Shinionoya & William M. Yen eds., 1999).

Various dictionaries and technical references are in general agreement that the oxides of the elements with the atomic numbers 58 (cerium) through 71 (lutetium) comprise the "rare earths" and that the elements themselves are known as the "rare-earth elements" or "rare-earth metals." Many, but not all, of the dictionaries and technical references consulted by the court consider atomic number 57 (lanthanum) to be a rare-earth element. The court has found that there is no general agreement as to whether atomic number 39 (yttrium) and atomic number 21 (scandium) are rare-earth metals. Accordingly, there is no general agreement on whether the oxide of yttrium is one of the so-called "rare earths" or "rare-earth oxides."

For these reasons, each of the terms "rare-earth metals," "rare earths," and "rare-earth oxides," when considered outside of any context, are ambiguous. The salient point, however, is that the article description for heading 2846, HTSUS, refers to yttrium and scandium in a context indicating that, for purposes of the heading, these two metals are not considered to be among the rare-earth elements. The heading identifies "[c]ompounds, inorganic and organic, of rare-earth metals, of yttrium or of scandium, or of mixtures of these metals." The plain meaning of the words indicates an intent to regard yttrium and scandium as separate from the rare-earth metals. The same intent is apparent from the wording of the article description for the heading in which the rare-earth metals are classified. Heading 2805 provides for "[a]lkali or alkaline-earth metals; rare-earth metals, scandium and yttrium, whether or not intermixed or interalloyed; mercury." Here also, the language indicates an intent to treat yttrium and scandium as separate from the rare-earth metals.

Plaintiff states in its memorandum in support of its summary judgment motion that "[t]he Explanatory Notes to the HTSUS indicate that the definition of 'rare earth' metals includes not

only those falling within the 'Lanthanide Series' of the periodic table of the elements (atomic numbers 58 through 71) but also the rare earth elements Lanthanum (atomic number 57), Yttrium (atomic number 39) and Scandium (atomic number 21)." *Mem. of P. & A. in Supp. of Pl.'s R. 56 Mot. for Summ. J.* at 21. Plaintiff has misinterpreted the Explanatory Notes. The Explanatory Notes, consistent with the terms of headings 2805 and 2846, instruct that scandium and yttrium are not to be considered rare-earth metals for purposes of the Harmonized System nomenclature. "Rare-earth metals (the term 'rare-earth' applies to their oxides) or lanthanons comprise the elements with atomic numbers from 57 to 71 in the periodic system . . . ." EN 28.05(C). "This heading [*i.e.*, heading 28.05] also covers **scandium** and **yttrium** which resemble the rare-earth metals quite closely . . . ." *Id.* (emphasis in original).

Because yttrium oxide is not a rare-earth oxide for purposes of heading 2846, P22-RE1 is not described by the term "mixtures of rare-earth oxides" as used in the article description for subheading 2846.90.20, HTSUS. The high (99 percent or higher) yttrium oxide content excludes P22-RE1 from subheading 2846.90.40, HTSUS ("Other: Yttrium bearing materials and compounds containing by weight more than 19 percent but less than 85 percent yttrium oxide equivalent"), which was in effect beginning in 1995. Therefore, the correct classification for P22-RE1 is subheading 2846.90.80, HTSUS (prior to 1995, subheading 2846.90.50, HTSUS), subject to duty at 3.7 percent *ad valorem*. Because this is the classification determined by Customs upon liquidation, plaintiff's classification claim, and its alternate classification claim, for P22-RE1 must be dismissed. Plaintiff has not met its burden of establishing that the government's classification of this product is incorrect, and defendant is entitled to summary judgment on the issue of the tariff classification of P22-RE1.

D. Issues of Fact Material to the Tariff Classification of P22-HCR2

The parties agree that P22-HCR2 consists by weight of approximately 90 percent $Y_2O_2S$, which is known as yttrium oxygen sulfide or "yttrium oxysulfide," approximately 10 percent $Eu_2O_2S$, which is europium oxygen sulfide or "europium oxysulfide," and less than 1 percent $Fe_2O_3$, iron ("ferrous") oxide. Also, it is undisputed that P22-HCR2 is used as a material in the production of phosphorescent coatings that are applied in the manufacturing of cathode ray tubes. The court concludes from the submissions of the parties, however, that at least one issue of fact material to the classification of this product otherwise exists that requires the court to deny the motions of both parties for summary judgment.

In seeking summary judgment, plaintiff's principal claim for classification of P22-HCR2 is subheading 3824.90.39, HTSUS, which pertains to "mixtures of two or more inorganic compounds." Plaintiff presented an alternative claim for classification of P22-HCR2 in subheading 2846.90.20, HTSUS, which provides for "[m]ixtures of rare-earth oxides or of rare-earth chlorides." This alternative claim was not included in the complaint, nor has plaintiff sought to amend its complaint to include this claim.[12] In its brief in support of summary judgment, plaintiff also asserted that "P22-HCR2 is also susceptible to classification under HTSUS subheading 2846.90.40, HTSUS." That subheading applies to "[y]ttrium-bearing materials and compounds containing by weight more than 19 percent but less than 85 percent of yttrium-oxide equivalent." Here also, plaintiff did not seek to amend its complaint to include

[12] Were plaintiff to do so, the court would find this alternative claim to be meritless. P22-HCR2 differs from the goods of subheading 2846.90.20, HTSUS, in several respects. It contains a compound, yttrium oxysulfide, that is not a rare-earth oxide for tariff classification purposes. It also contains a small amount of iron oxide, which is not a rare-earth oxide.

this claim.[13] In its post-argument brief, plaintiff addressed only its principal claim for classification of P22-HCR2 in subheading 3824.90.39, HTSUS.

With respect to plaintiff's principal classification claim, subheading 3824.90.39, HTSUS, ("Mixtures of two or more inorganic compounds: Other") describes P22-HCR2 by composition; however, the pertinent term of the superior heading is "chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products) *not elsewhere specified or included*." Heading 3824, HTSUS (emphasis added). By application of GRI 1, heading 3824 is excluded from consideration if P22-HCR2 is specified or included by the terms of another heading.

In its cross-motion for summary judgment, defendant claims that Customs was correct in classifying P22-HCR2 in subheading 3206.50.00, HTSUS, the article description for which is "[i]norganic products of a kind used as luminophores." The pertinent language of the article description for the superior heading, heading 3206, HTSUS, is also "[i]norganic products of a kind used as luminophores."

The phrase "of a kind used as luminophores," as used in heading 3206 and subheading 3206.50, HTSUS, identifies a tariff provision controlled by principal use. *See Primal Lite, Inc. v. United States*, 182 F.3d 1362, 1363-64 (Fed. Cir. 1999) (holding that a heading with the phrase "of a kind used" is a principal use provision). "The purpose of 'principal use' provisions in the HTSUS is to classify particular merchandise according to the ordinary use of such

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[13] Plaintiff has not developed its argument for this second alternative claim. The court notes, however, that the presence of iron oxide, which is not a compound of yttrium, scandium or the rare-earth metals, would appear to exclude the product from heading 2846, even if plaintiff could show that the article description for subheading 2846.90.40, HTSUS, describes P22-HCR2.

merchandise, even though particular imported goods may be put to some atypical use." *Id.* at 1364 (citing *Clarendon Mktg. v. United States*, 144 F.3d 1464, 1467 (Fed. Cir. 1998)); *see also E.M. Chems. v. United States*, 20 CIT 382, 387, 923 F. Supp. 202, 208 (1996) ("the principal use of the class . . . is controlling, not the principal use of the specific import"). "Principal use" is defined as the use "which exceeds any other single use." *See Minnetonka Brands, Inc. v. United States*, 24 CIT 645, 651, 110 F. Supp. 2d 1020, 1027 (2000) (citing Conversion of the Tariff Schedules of the United States Annotated Into the Nomenclature Structure of the Harmonized System: Submitting Report at 34-35 (USITC Pub. No. 1400) (June 1983)).

Additional U.S. Rules of Interpretation 1(a), HTSUS, provides that "[i]n the absence of special language or context which otherwise requires–a tariff classification controlled by use (other than actual use)[14] is to be determined in accordance with the use in the United States at, or immediately prior to, the date of importation, of goods of that class or kind to which the imported goods belong, and the controlling use is the principal use."

The Court of Appeals for the Federal Circuit has held that delimiting the class or kind of goods to which the imported goods belong "[c]all[s] for a determination as to the group of goods that are commercially fungible with the imported goods." *Primal Lite*, 182 F.3d at 1365. Moreover, the taxonomy of the group should be narrowly drawn to encompass only "the particular species of which the [subject] merchandise is a member." *Id.* at 1364. The court may examine factors such as: (1) the general physical characteristics of the merchandise; (2) the

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[14] The court concludes that heading 3206 and specifically, subheading 3206.50, HTSUS, do not establish an "actual use" provision so as to invoke the operation of Additional U.S. Rule of Interpretation 1(b). The language of the provision does not require establishing "the actual use made of the imports in the United States" as would a provision controlled by actual use. *See Clarendon Mktg.*, 144 F.3d at 1468.

expectation of the ultimate purchasers; (3) the channels of trade in which the merchandise moves; (4) the environment of the sale (*e.g.*, the manner in which the merchandise is advertised and displayed or the accompanying accessories); (5) the usage of the subject merchandise and whether that use corresponds to the use of class-defining merchandise; (6) the economic practicality of using the import in that manner; and (7) the recognition in the trade of this use. *See United States v. Carborundum Co.*, 63 C.C.P.A. 98, 102, 536 F.2d 373, 377 (1976) (citations omitted); *see also Lenox Collections v. United States*, 20 C.I.T. 194, 196 (1996). "Susceptibility, capability, adequacy, or adaptability of the import to the common use of the class is not controlling." *Carborundum*, 63 C.C.P.A. at 102, 536 F.2d at 377 (citations omitted).

In moving for summary judgment on the classification of P22-HCR2, Optonix challenges the Customs classification of P22-HCR2 under heading 3206 as a "product of a kind used as a luminophore," contending that "[p]roducts that are commercially fungible with P22-HCR2 are not used as luminophores because of the need to further process these items in order to make them commercially usable." *Pl.'s Reply in Opp'n to Def.'s Cross-Mot. for Summ. J.* at 15. In an affidavit by Mr. Richard Castello, a sales engineer for Optonix, plaintiff identified additional processing that P22-HCR2 is said to undergo before it is supplied to Optonix's customer for use in manufacturing television picture tubes.

To support its cross-motion for summary judgment, defendant relies, in part, on plaintiff's statement in the protest that P22-HCR2 is used in the manufacture of phosphors for television screens. Defendant also relies on the second affidavit of Mr. Fluty on P22-RE1, which states that "'P22' is the name from the Electronics Industries Association (EIA) for a family of phosphors used in color cathode ray tubes and elsewhere." *Second Fluty Decl.* ¶ 14. Some

dictionary definitions identify "phosphors" as a subset, along with "fluorophores," of "luminophores." *See Oxford English Dictionary*, 1105, vol. V (2d ed. 1989) ("Other terms sometimes used synonymously with phosphor are luminophor . . . or fluorophor.").[15] Also relevant to the "principal use" issues are statements in another affidavit of Mr. Fluty, submitted by defendant, that identify the chemical mixture comprising P22-HCR2 as a "red luminescent phosphor" and a "pigment coated phosphor." These statements were supported by reference to a process patent for producing pigment-coated phosphors, the documentation for which, attached to the affidavit, lists as an assignee Kasai Optonix, Ltd., the manufacturer of P22-HCR2.

The court's examination of the pleadings, admissions, and affidavits reveals at least one issue of fact material to the tariff classification of P22-HCR2. The principal issue of fact to be resolved is whether the class or kind of goods to which P22-HCR2 belongs were, at or immediately prior to the time of importation, principally used in the United States as "luminophores." The relevant Explanatory Note contains the following definition: "Inorganic products of a kind used as luminophores are products which, under the action of visible or invisible radiations (solar rays, ultra-violet rays, cathode rays, X-rays, etc.), produce a luminescent effect (flourescent or phosphorescent)." EN 32.06(B). Based on this guidance, on Additional U.S. Rule of Interpretation 1(a), and on dictionary definitions of "luminophore" and "phosphor," the court concludes that determination of the correct classification of P22-HCR2 requires a factual determination whether the class or kind of goods to which P22-HCR2 belongs

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[15] A luminophor is defined therein as "[a] luminescent substance. . . . The generic term *luminophor* is subclassified into fluorophors . . . and phosphors. . . ." *Id.* at 99, vol. IX. A phosphor is "[a]nything that phosphoresces, or emits light without sensible heat" or in modern use "any substance exhibiting phosphorescence or fluorescence, esp. one that is an artificially prepared solid." *Id.* at 708, vol. XI.

were, at or immediately preceding importation, principally used in the United States for their luminescent property. The court's consideration of this issue is confined to the pleadings, admissions and supporting affidavits of the parties, which are not sufficient to resolve the issue. In summary, plaintiff alleges the existence of a class or kind of products not used as luminophores because of the need to further process these items in order to make them commercially usable. Defendant does not directly address the issues raised by the application of Additional U.S. Rule of Interpretation 1(a), HTSUS, but contends that "[t]he fact that the P22-HCR2 undergoes further processing after importation in the form of blending to meet a customer's specification does not prevent it from being a kind of product (i.e., a phosphor) used as a luminophore, as the plaintiff argues." *Def.'s Br. in Reply to Pl.'s Post-Argument Br.* at 9-10.

In addition, the parties appear to be in disagreement on a physical characteristic of P22-HCR2. Defendant's argument is premised in part on its contention that the product, as imported, is of a kind used as a luminophore, based on its characteristics and its use in the manufacturing of color cathode ray tubes. Plaintiff indicated that P22-HCR2, in the condition in which it is imported, *i.e.*, before the processing plaintiff identifies as necessary to commercial use, does not luminesce or does so only crudely.

Because the court has identified facts that are material to the proper application of Additional U.S. Rule of Interpretation 1(a), HTSUS, to the determination of the tariff classification of P22-HCR2, and because these facts remain in controversy, the motion and cross-motion for summary judgment of plaintiff and defendant, respectively, must be denied with respect to the classification of P22-HCR2.

## IV. CONCLUSION

The court awards to defendant partial summary judgment based on its determination that there is no genuine issue of fact material to the classification of P22-RE1 and its conclusion that Customs was correct in classifying in subheading 2846.90.50, HTSUS, the entries of P22-RE1 made prior to 1995 and in classifying in subheading 2846.90.80, HTSUS, the entries of P22-RE1 made in 1995 and thereafter. The court concludes that summary judgment is not appropriate to resolve the dispute between the parties concerning the classification of P22-HCR2 because of the existence of at least one issue of fact material to the classification of this product. That issue, as discussed above, is whether the class or kind of goods to which P22-HCR2 belongs were, at or immediately preceding the time of importation, principally used in the United States for their luminescent property.

## V. ORDER

This action having been duly submitted for decision, and this court, after due deliberation, having rendered a decision herein; now, in conformity with that decision, it is hereby

**ORDERED** that plaintiff's motion for summary judgment be, and hereby is, denied; and it is further

**ORDERED** that defendant's cross-motion for summary judgment be, and hereby is, granted with respect to the determination of the tariff classification of plaintiff's entries of P22-RE1 at issue in this case; and it is further

**ORDERED** that defendant's cross-motion for summary judgment be, and hereby is, denied with respect to the determination of tariff classification of plaintiff's entries of P22-HCR2 at issue in this case; and it is further

**ORDERED**, pursuant to USCIT R. 56(d), that the following facts material to the tariff classification of P22-HCR2 are specified to exist without substantial controversy: (1) P22-HCR2 consists of a red powder comprised by weight of at least 90 percent yttrium oxygen sulfide ($Y_2O_2S$), 10 percent or less europium oxygen sulfide ($Eu_2O_2S$), and 1 percent or less ferrous oxide ($Fe_2O_3$); and (2) P22-HCR2 is used as a material in the production of phosphorescent coatings that are applied in the manufacturing of cathode ray tubes; and it is further

**ORDERED**, pursuant to USCIT R. 56(d), that at least one fact material to the tariff classification of P22-HCR2 is specified as remaining in controversy, that fact being whether the class or kind of goods to which P22-HCR2 belongs were, at or immediately preceding the time of importation, principally used in the United States for their luminescent property; and it is further

**ORDERED**, pursuant to USCIT R. 56(d) and R. 16, that the parties shall consult with the objective of developing for submission to the court an agreed-upon draft scheduling order to govern such further proceedings as are necessary to resolve the factual issue or issues material to the determination of the tariff classification of P22-HCR2 and to govern other proceedings as are necessary in this case, including dates for discovery, if any, the filing of dispositive motions, if any, and tentative dates for trial; and it is further

**ORDERED** that the parties shall file with the court on or before March 18, 2005 an agreed-upon draft amended scheduling order, except that, in the event the parties are unable to agree upon a draft amended scheduling order, each party shall file with the court by that date its own proposed draft amended scheduling order.

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Timothy C. Stanceu
Judge

Dated: February 18, 2005
New York, New York