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**Comptroller General
of the United States**

**United States General Accounting Office
Washington, DC 20548**

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Decision

Matter of: Fire-Trol Holdings, LLC

File: B-293103; B-293254

Date: February 2, 2004

Paul F. Dauer, Esq., and Jennifer L. McCreedy, Esq., Best Best & Krieger, for the protester.

John G. Horan, Esq., and Jason A. Carey, Esq., McDermott, Will & Emery, for Astaris, LLC, an intervenor.

Marion T. Cordova, Esq., Department of Agriculture, for the agency.

Edward T. Goldstein, Esq., and Christine S. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

1. Protest that agency improperly included competitor's products on qualified products lists (QPL) is denied where agency reasonably determined that re-testing of modified or changed products was unnecessary before listing those products on the QPL and where the agency reasonably determined the products complied with its qualification requirements.
 2. Agency's inclusion of patent indemnity clause in solicitations is unobjectionable where the solicitations are for supplies that are sold or offered for sale to the public in the commercial market.
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DECISION

Fire-Trol Holdings, LLC protests the inclusion of a competitor's products on the qualified products lists (QPL) under invitation for bids (IFB) Nos. 49-03-10, 49-03-15, and 49-03-16 and under request for proposals (RFP) Nos. 49-03-09, 49-03-13, and 49-03-14, issued by the United States Department of Agriculture (USDA), Forest Service. Fire-Trol contends that the protested products, manufactured by Astaris, LLC, fail to satisfy several of the specifications required for approval. Fire-Trol also challenges the agency's inclusion of a patent indemnity clause in the solicitations.

We deny the protests.

Background

The Forest Service purchases chemical-based, water-soluble, long-term fire retardants for use in preventing and suppressing “wildland” fires throughout the United States. The retardants at issue in this case are those that are dropped from the air by fixed-wing aircraft (that is, aircraft other than helicopters). Generally speaking, a retardant product has four main components: (1) its salt content, which largely determines the product’s combustion-retarding effectiveness; (2) its colorant; (3) its corrosion inhibitor; and (4) its thickening agent.

The fire retardant products used by the Forest Service are manufactured and supplied in various forms with different properties. Some retardant products are supplied in a powder form (dry concentrate), which is mixed with water prior to use. Others are supplied in a liquid form (wet concentrate), also referred to as liquid concentrate products, and are diluted with water prior to use. A given liquid concentrate product may be available in different concentrations; however, once diluted, they “should be identical in concentration and performance.”¹ Agency Report (AR) Tab AO, Agency Memorandum of Law at 4.

Fire retardant products also have varying color characteristics. Some are uncolored, while others are classified as colored due to the fact that they contain iron oxide. Generally, retardant products that contain iron oxide have an “R” designation since iron oxide imbues the product with a reddish color. Retardants with an “F” designation are those that do not contain iron oxide but have what is referred to as a fugitive color. Fugitive products are visible for a short period of time but quickly fade into the landscape.

In addition, products have varying degrees of viscosity. “Unthickened” products (essentially water-like) have a lower viscosity than “thickened” products, which contain some form of thickening agent such as gum and are generally categorized as of high, medium, or low viscosity, depending upon the amount of thickening agent in the product. The more thickening agent a product contains, the higher its viscosity.

The IFBs, which were issued on October 21, 2003, anticipate the award of fixed-price indefinite-quantity requirements contracts for the supply of long-term fire retardant at permanent firefighting bases throughout the United States as well as the attendant services of mixing and storing the retardant and loading of the retardant into

¹ For example, a liquid concentrate product with a water to product mix ratio of 3.1:1 requires the dilution of 3.1 parts water to one part product, while a more concentrated version of the same product (one with less water to start with), for instance a version with a mix ratio of 3.6:1, would require the dilution of 3.6 parts water to one part product. Both mix ratios of the retardant product when diluted for use in an aircraft, however, yield the same concentration.

airtankers (or as otherwise directed by the agency).² The RFPs, on the other hand, which were issued on October 31, 2003, anticipate the award of fixed-price indefinite-quantity requirements contracts, which are solely for the supply of long-term fire retardant at various permanent firefighting bases; they are essentially “bulk” purchase contracts for fire retardant.³

All of the solicitations provide that the retardants must be qualified and approved in accordance with the governing Forest Service specification, 5100-304b, dated January 2000. Products that have been approved in accordance with specification 5100-304b are listed on the Forest Service’s fire retardant QPL and can be offered without further qualification.

With regard to qualification testing, Forest Service specification 5100-304b states as follows:

4.3.1. Qualification Tests. The samples submitted shall be subjected to the applicable tests listed in 4.5 to determine if they meet the requirements of 3.4 through 3.13. These tests will be conducted at Forest Service facilities or other laboratories designated by the Forest Service. Following satisfactory completion of laboratory testing, an operational field evaluation may be conducted as required in 3.14.

Section 4.5 of the specification 5100-304b, referenced in section 4.3.1, sets forth a range of qualification tests that a retardant must satisfy in order to be listed on the QPL as fully qualified. As it relates to this case, the specification includes the following testing requirements: (1) combustion-retarding effectiveness (section 4.5.2); (2) corrosion (section 4.5.6); (3) product stability (section 4.5.5); (4) air-drop characteristics (section 4.5.9); (5) field visibility (section 4.5.10); and (6) operational field evaluation testing (section 4.5.11).⁴ Some of the above-identified tests are considered “lab” tests because they are performed in a laboratory under controlled conditions. These would include the tests for combustion-retarding effectiveness,

² IFB No. 49-03-10 is for a single base year, with no option years; IFB No. 49-03-15 is for a single base year, with 1 option year; and IFB No. 49-03-16 is for a single base year, with 2 option years.

³ IFB No. 49-03-9 is for a single base year, with no option years; IFB No. 49-03-13 is for a single base year, with 1 option year; and IFB No. 49-03-14 is for a single base year, with 2 option years.

⁴ The other specification testing requirements, which are not at issue in this case, are: (1) mammalian toxicity and irritation; (2) optimum mixing; (3) physical properties (including active salt content, viscosity, steady state viscosity, density, pH value, and refractometer reading); (4) pumpability; and (5) abrasion.

corrosion, and product stability. Testing for air-drop characteristics, field visibility, and the operational field evaluation tests are conducted in the field under variable conditions.

The specification further describes qualification of changed or modified products in section 4.3.4:

4.3.4. Qualification of Changed or Modified Product. Prior to making any changes in the formulation, including the type, quantity, quality, processing, supplier, manufacturer, or manufacturing site of individual ingredients, the retardant manufacturer shall notify the National Director, Fire and Aviation Management, USDA Forest Service. At the option of the Forest Service, qualification testing may be required.

According to the agency, the submission process for qualification testing begins with a manufacturer submitting a letter to the Forest Service requesting that it evaluate one of its products. Before testing is conducted, the manufacturer provides necessary information pertaining to its product, referred to as the “product information sheet.” The information sheet includes the chemical formula, or “recipe” for the product, which includes the manufacturer of each ingredient, the quality of each ingredient, and the amount of each ingredient by percentage weight in concentrate and at the use-level mix of the product. The manufacturer also assigns the product a “lot number,” which is unique for that specific product. If, for example, there is a change to the manufacturer of an ingredient, that product would require a separate lot number. See AR, Tab AQ, Statement by Project Leader for the Wildland Fire Chemical Systems Program at the Forest Service’s Missoula Technology and Development Center, Nov. 24, 2003.

The agency notes that it does not perform each of the above-described tests for every product submitted for qualification. In fact, the agency indicates that none of the products on the QPL, including the protester’s products, have been subjected to the full range of tests identified in the solicitation. See Hearing Transcript (Tr.) at 202-03.⁵ In this regard, while, according to the agency, corrosion and stability testing are always performed, with respect to other tests, the agency determines, on a case-by-case basis, whether a particular test is necessary based on its understanding of the product’s ingredients and its probable test results.

⁵ Our Office conducted a hearing on the protest during which testimony was received from the Program Leader for the Wildland Fire Chemical Systems Program at the Forest Service’s Missoula Technology and Development Center, as well as the Project Leader for Fire Chemicals within the Forest Service’s Wildland Fire Chemical Systems Program.

Thus, the agency explains that it looks to the salt content of the product to determine whether burn testing is required. Where the salt content is sufficiently similar to another product submitted by the manufacturer and that product has been successfully burn tested, the agency may determine that the product meets the agency's combustion-retarding effectiveness requirements, without burn testing the product. Evidently, over the years, the agency has applied this method of evaluating a product's combustion-retarding effectiveness with respect to products from both the protester and the intervenor. See, e.g., AR, Tab R, Agency Letter to Fire-Trol, Apr. 15, 2002 (agreeing with the protester that certain of its products submitted for qualification did not require burn testing based on the fact that they contained more active salts than another one of the protester's products, which had been successfully burn tested).

With regard to air-drop testing, the agency explains that it has not performed this test in years because it has sufficient data indicating that products with a particular thickening agent (e.g., gum-thickened products) have very similar air-drop characteristics. See Tr. at 45. According to the agency, scheduling this test is challenging: it can only be performed in the late fall or early spring (since it must be performed under certain weather conditions), when an airtanker is available, and when there is a location available to safely drop retardant and perform measurements. See AR, Tab AQ, supra. Moreover, the agency notes that the test is time-consuming as well as very expensive, with costs ranging from tens to hundreds of thousands of dollars. Id. Accordingly, the Forest Service will not evaluate a product's air-drop characteristics, through actual testing, unless the product uses a new type of thickening agent. Id.

Similarly, the agency indicates that for the last several years, it has not performed visibility testing on products submitted for qualification that use iron oxide for its colorant. See Tr. at 45. Because visibility testing is time-consuming, expensive, and highly subjective, the agency explains, as long as a product submitted for qualification contains iron oxide in an amount that has been used for numerous years, there is no need for the product to be visibility tested as part of the qualification process. See AR, Tab AQ, supra; Tr. at 50.

Specific Products

The solicitations at issue in the protests include the agency's QPL of September 5, 2003, as an attachment. This QPL listed the following Astaris fire retardant products as "fully qualified": (1) Phos-Check HV-R (3.6:1 mix ratio); (2) Phos-Check HV-R (3.1:1 mix ratio); (3) Phos-Check MV-R; (4) Phos Check LV-R; (5) Phos-Check LC-95A; and (6) Phos-Check LC-95D.

All of the products at issue were subjected to laboratory testing for corrosion and stability and were determined to be acceptable.⁶ None of the products, however, when submitted for qualification, were subjected to burn testing, visibility testing, or testing for air-drop characteristics. With regard to air-drop testing, since the six products are all gum-thickened products, the agency determined that testing their air-drop characteristics was unnecessary because, as explained above, gum-thickened products, according to the agency, have proven to have similar and satisfactory air-drop characteristics. The agency determined that visibility testing was not required because all of the products use iron oxide for their colorant, and, as described above, the agency does not test the visibility of products that use iron oxide.

As to burn testing, the agency determined that testing of the HV-R, MV-R, and LV-R products was not necessary because they all contained higher retardant salt contents than a similar Astaris product, D75-F, which was successfully burn tested and qualified. See AR, Tab I, Revising Status of Fluid Concentrate Products Having a 3.6:1 or 3.7:1 Mix Ratio, June 2, 2003. According to the agency, the higher the salt content of a similar product the better its combustion-retarding effectiveness. Each of these products uses a combination of retardant salts to provide its fire retarding characteristics. According to the agency, while the amounts of the various salts may not be exactly the same, they can all be standardized by calculating their P₂O₅ (fire retarding salt) equivalent. Based on the P₂O₅ value, the agency indicates that it can calculate the combustion-retarding characteristics of a product based on results from past tests. Since HV-R, MV-R and LV-R all have higher calculated P₂O₅ values than D-75R, the agency determined that these products did not require burn testing.

Similarly, as to LC-95A and LC-95D, the agency determined that burn testing was not necessary because they contained higher salt contents than similar Astaris products that had been successfully burn tested. The agency explains that LC-95A and LC-95D

⁶ During operational field evaluation testing of LV-R and MV-R, which began in 1991, field samples of these products were subjected to laboratory corrosion testing. Based on the results of those tests, the products were not qualified. See AR, Tab B, Letter, Subject: Status of Field Testing of Phos-Check HV-R, MV-R, and LV-R, Jan. 12, 1994, at 2; Tab BR, Letter, Subject: 1994 Operational Field Testing of Phos-Check retardants, Jan. 14, 1994, at 2; and Tab DL, Status Report for the Fire Chemicals Executive Committee, Fluid and Liquid Concentrates, Nov. 27, 1992, at 11-12. According to the agency, these corrosion test results were ultimately discounted due to non-representative product samples being used for the corrosion testing, which resulted from problems with recirculation of the product during storage, problems that were later remedied. See Tr. 207-09; cf. AR, Tab AR, Operational Evaluation Test Plan for Phos-Check Fluid Concentrate Fire Retardants HV-R and HV-F, May 1992, at 1 (discussing recirculation problems with LV-R and MV-R during 1991 field evaluation of these products).

are wet concentrates that are formulated using a liquid ammonium polyphosphate (APP) fertilizer as the source of their P₂O₅. The agency also notes that the burn characteristics of APP can vary depending on its source; thus, knowing the source of the APP is critical when evaluating a product's combustion-retarding properties. In this case, Simplot 11-37-0 is the source of the APP for LC-95A and Simplot 10-34-0 is the source of APP for LC-95D.

With regard to LC-95A, the agency determined that burn testing was unnecessary because it had a higher salt content than another similar Astaris wet concentrate product, lot number 1051695-E, which had been successfully burn tested. Both LC-95A and lot number 1051695-E use Simplot 11-37-0 as the source of their fire retarding salt. Burn testing for LC-95D was determined to be unnecessary because it had a higher salt content than lot number 1051615-E and LRA, both of which were successfully burn tested. LC-95D, lot number 105615-E and LRA all use Simplot 10-34-0 as the source of their fire retarding salt.

As to operational field evaluation testing, HV-R (3.1:1) was subjected to a full operational field evaluation and LV-R was subjected to a monitor-level field evaluation. See AR, Tab B, Letter, Subject: Status of Field Testing of Phos-Check HV-R, MV-R, and LV-R, Jan. 12, 1994; Tab C, Letter, Subject: Results of the Laboratory Evaluation of the Corrosivity of Field Test Samples of Phos-Check HV-R, Feb. 10, 1994. Since HV-R (3.1:1) had passed the full field evaluation, the agency determined that a field evaluation for HV-R (3.6:1) was not necessary. The agency also determined that a field evaluation was not necessary for MV-R since LV-R had successfully passed the monitor-level field evaluation.

With regard to LC-95A and LC-95D, the agency determined that field testing was not necessary because they were similar to another Astaris formulation, LRA, which had been successfully field tested. According to the agency, the LC-95 formulations were the same as, or contained improvements to, the LRA formulation. Specifically, the amount of iron oxide was the same for these products, thus leading the agency to conclude that they should have similar visibility characteristics in the field. In addition, the agency considered the LC-95 formulations to be an enhancement of LRA because they are gum-thickened, improving their air-drop performance when compared with LRA, an unthickened product. The LC-95 formulations also use a different corrosion inhibitor, which had "very good" results in the laboratory corrosion tests and, therefore, did not trigger the need for a field test according to the agency. Tr. at 193.

In its protest, Fire-Trol contends that all of the above six identified Astaris products were improperly listed as fully qualified on the solicitations' QPL. As a threshold matter, the protester contends that, under the terms of the specification, the agency did not have the authority to waive burn testing and visibility testing for the products. Alternatively, to the extent the agency did have such authority, the protester maintains that it abused its discretion in determining that LV-R, MV-R, and

the LC-95 formulations did not require air-drop testing. In addition, the protester asserts that both HV-R formulations should not have been qualified because HV-R (3.1:1) has demonstrated problems with corrosion when used in the field. The protester also asserts that the agency abused its discretion in determining that operational field testing was not necessary for MV-R and the LC-95 formulations, and challenges the scope and results of the monitor-level field evaluation of LV-R.

Where a solicitation requires that a product be qualified or approved, it is improper to include in the list of approved products an item that has not been properly approved and does not satisfy the applicable specifications; an agency's including such a product in the list may constitute a basis for sustaining a protest if the agency's action prejudices another offeror. Chemonics Indus., Inc., B-260284, Apr. 19, 1995, 95-1 CPD ¶ 206 at 3. The conduct of qualification testing, however, is an area where contracting agencies have broad discretion so long as their actions are reasonable and do not prejudice potential offerors, by, for example, treating them unequally. Id. at 4.

Discretion to Waive Testing

In support of its position that the agency could not waive burn or visibility testing for the subject products, the protester points to language in the specification stating that the combustion-retarding effectiveness of a product “shall be determined by burning treated 8 foot fuel beds” and that a product “shall be tested to determine visibility on a variety of fuel types and conditions (slope, aspect, daylight conditions, and weather).” Specification 5100-304b §§ 4.5.2, 4.5.10 (emphasis added).

The agency contends, however, that it had the authority under the terms of the specification not to conduct burn testing or visibility testing for the products at issue. In support of its position, the agency points to the section of the specification pertaining to qualification of changed or modified products, which provides: “At the option of the Forest Service, qualification testing may be required.” Specification 5100-304b § 4.3.4 (emphasis added). According to the agency, the products at issue are all changed or modified versions of products that had already been qualified, and thus re-testing of these changed or modified products was within its discretion. The agency also relies on language in the specification regarding qualification testing in general, which states: “The samples submitted shall be subjected to the applicable tests listed in 4.5 to determine if they meet the requirements of 3.4 through 3.13.” Specification 5100-304b § 4.3.1 (emphasis added). The agency argues that use of the term “applicable” means that not all of the tests listed in section 4.5 of the specification will necessarily be conducted and that the agency has the discretion to determine which tests are “applicable.”

The protester contends that the agency's interpretation is unreasonable. According to the protester, none of the products at issue are modifications of prior approved products, and thus section 4.3.4 of the specification, on which the agency relies, does

not apply. Further, Fire-Trol argues, even if section 4.3.4 did apply, because the agency determined that some qualification tests were necessary, the agency was required to conduct the full battery of tests identified in the specification, which includes burn and visibility testing. Moreover, the protester argues that the phrase “applicable tests” in section 4.3.1 does not mean that all tests are discretionary, but refers only to those areas where the specification expressly affords the agency discretion in deciding whether to conduct a test (specifically, air-drop and operational field evaluation testing).⁷ Since the agency used clear language to retain the discretion to waive air-drop testing and operational field evaluation testing, the protester adds that the agency obviously intended not to provide for such discretion where it did not include similar language, *i.e.*, with regard to burn and visibility testing.

As an initial matter, it should be noted that while Fire-Trol now contends that the language of the solicitation cannot be read to allow for the waiving of burn testing and visibility testing based on the characteristics and performance of other similar products, Fire-Trol had actively sought and obtained such waivers with regard to its products in the past. Thus, the protester’s argument that the agency’s interpretation of its specification, one that the protester had previously taken advantage of, is unreasonable and improper, appears disingenuous and unpersuasive on its face. In any event, the protester’s narrow interpretation of the specification terms, and how they were applied to the six products at issue, is unreasonable in this case.

First, contrary to the protester’s assertion, when evaluating a modified or changed product, the specification does not expressly require that the agency conduct the full range of qualification testing set forth in the specification; rather, the specification simply states that “qualification testing may be required.” Specification 5100-304b § 4.3.4. The agency has, as a matter of practice, one that the protester was fully aware of and benefited from, determined that the scope of the qualification testing of a changed or modified product depends on the nature of the changes or modifications. Given the broad discretion afforded agencies with regard to the conduct of qualification testing, and the discretion afforded the agency by the specification itself in determining whether qualification testing of a modified or changed product is required at all, the agency has reasonably interpreted specification section 4.3.4 as providing it with the latitude to only conduct those

⁷ Specifically, section 4.5.9 of the specification provides for testing a retardant’s air-drop characteristics “as deemed necessary by the Forest Service” With respect to operational field evaluation testing, the specification requires the agency “to determine the need for an operational field evaluation” and to document the rationale for “no field test.” Specification 5100-304b § 3.14.

qualification tests that it deems necessary for changed or modified products based on the nature of the changes or modifications.⁸

Second, it is for the agency to determine, based on its understanding of the retardants and the specification requirements, whether a product submitted for qualification is a changed or modified version. There is nothing in the record to suggest that the agency's decisions in this regard were unreasonable. As the agency noted, when determining whether to test the HV-R, MV-R, and LV-R family of products, it compared the mixed form of these products with the mixed form of a "similar" Astaris product, D75-F, which had been successfully burn tested, qualified, and used since 1984. Tr. at 169. According to the agency, the composition of the mixed form of these products was essentially the same as the composition of the D75-F product, with the main difference being the colorant used in D75-F (HV-R, MV-R, and LV-R all contain iron oxide for their colorant while D75-F is a fugitive colored product). Moreover, the agency's determination that the mixed versions of these products were all similar is supported by the information set forth in the confidential disclosure sheets for these products, which contain their formulations. These sheets reflect that all of the products have the same ingredients, other than colorant, and the ingredients vary only slightly in amount. Thus, it was not unreasonable for the agency to conclude that these products were merely different versions of the same product.

Similarly, with regard to LC-95A and LC-95D, the agency equated these products to other Astaris ammonium polyphosphate formulations that had undergone various qualification tests. For example, LC-95A was determined to be "similar" to lot number 1051695-E, and LC-95D was determined to be similar to Phos-Check LRA. See AR, Tab AH, Letter, Subject: Analysis to Determine Need for Operational Field Evaluation of Phos-Check LC-95A and Phos-Check LC-95D.

The main difference between the products is the corrosion inhibitor used and the fact that LC-95A and LC-95D were thickened products to improve their air-drop characteristics. Again, the confidential disclosure sheets for these products reveal that their formulations are very similar. Thus, it was not unreasonable for the agency to conclude that these products were, in essence, merely different versions or variations of the same product.

⁸ Because language in the specification regarding changed or modified products provided the agency with the discretion to waiving burn and visibility testing in this case, we need not address the parties' arguments addressing the question of whether the specification's use of the phrase "applicable tests" also provided the agency with the discretion to waive burn and visibility testing.

Burn Testing

The protester alternatively argues that even if the agency had the discretion not to burn test the products at issue, it abused that discretion because changes to minor ingredients, such as the addition of or change in thickener, can affect the combustion-retarding effectiveness of a product. In support of its argument, the protester relies primarily on a Forest Service research article stating “retardant effectiveness cannot be accurately predicted by analysis of total concentration of active salts” Protest, Tab J, Flammability Reduction Comparisons of Four Forest Fire Retardants, April 1988, Aylmer D. Blakely, at 1. The protester also generally argues that it was an abuse of discretion to rely on the burn test results of another product because the multiple burn test results for a particular product can be variable.⁹

⁹ In addition, with regard to LC-95A and LC-95D, the protester challenges the combustion-retarding effectiveness test results of LRA. While we find protester’s contentions in this regard to be unfounded, they are also, however, not relevant since the agency determined that the LC-95 formulations were qualified based on the fact that they had a higher active salt content than lot numbers 1051695-E and 1051615-E, respectively. The protester also raises concerns about the burn test results of these two lot numbers, arguing that the results were unreliable due to problems resulting from changes to the burn test chamber. The agency indicates that while it had made changes to its burn chamber, which for a period yielded inconsistent burn test results, when it tested the two lot numbers in question, the burn chamber was providing satisfactory results. Tr. at 246-47. Moreover, to the extent that the protester contends that the test results were conducted at a time when testing conditions in the burn chamber were variable, the agency’s witness testified at the hearing that the burn conditions in fact were more severe and stated that “if a product burned well enough to meet the requirements under those severe conditions, we considered them good enough” Tr. at 229. The protester’s argument in this regard thus does not serve as a valid basis for challenging the agency’s qualification of LC-95A or LC-95D.

The protester also maintains that the agency’s reliance on the burn test results of D75-F for the purposes of qualifying HV-R, MV-R, and LV-R was improper because the agency failed to demonstrate that D75-F had been successfully burn tested. The agency’s witness, however, testified that D75-F had been successfully burn tested and used in the field since 1984. Tr. at 168. As the agency notes, the fact that D75 has been effective in the field lends strength to the burn testing results for D75. Thus, contrary to the protester’s assertions, there is sufficient evidence in the record establishing that D75 was burn tested and properly qualified. See also AR, Tab AI, Letter from 1984 (indicating D75 formulations met all specification requirements and were “fully qualified”).

The protester's challenges to the agency's conclusions regarding the combustion-retarding effectiveness of the products at issue, and its concerns about the inherent unreliability of burn testing in general, amount to little more than speculation and disagreement concerning the agency's burn testing procedures and fundamental position that, because the products at issue all had higher active salt content than products which had been successfully burn tested, it could reliably conclude that burn testing was not necessary.¹⁰ While the report cited by the protester suggests that "some" additives to a product such as its thickener or corrosion inhibitor "can" affect a product's fire retarding characteristics, the protester fails to demonstrate how any of the changes to the products at issue would have negatively affected their burn characteristics, particularly where they had higher active salt than the burn tested products. Given the agency's discretion in determining whether a product has met its specification requirements, and the agency's reasoned approach to analyzing the burn characteristics of the products at issue, we find the protester's challenges unpersuasive.

Visibility Testing

In terms of visibility testing, the protester argues that the agency abused its discretion by waiving testing for MV-R, LV-R, LC-95A and LC-95D. According to the agency, visibility testing was not required for these products because they all contain iron oxide, and products containing iron oxide have proven over the years to be sufficiently visible when used in the field. Moreover, the agency noted that MV-R and LV-R contain the same amount of iron oxide as D75-R, which had been fully qualified and successfully used in the field and that LC-95A and LC-95D contained the same amount of iron oxide as LRA, which was also determined to have met the agency's visibility requirements.

The protester maintains, at least with respect to MV-R and LV-R, that viscosity also affects a product's visibility and that the agency failed to take this into account when determining that visibility testing for these products was unnecessary. As support

¹⁰ The protester also asserts that LC-95A actually has a lower salt content than lot number 1051695-E. While LC-95A has a .06 percent lower "nominal" salt content than lot number 1051695-E--a difference which the agency indicates is not of a sufficient magnitude to affect the combustion retarding characteristics of the products, see Tr. at 189-91--LC-95A had a higher analyzed salt content than the salt content of the burn-tested version of lot number 1051695-E. According to the agency, the "nominal" salt content is a calculated value, based on information provided by the manufacturer of a product. Tr. at 480-85. The analyzed salt content is determined from an actual laboratory measurement of the salt content of a product. Tr. at 481-82.

for its contention that viscosity must be considered when evaluating visibility, the protester highlights the fact that during operational field testing of fugitive colored products, a high viscosity product was determined to have satisfactory visibility characteristics, while medium and low viscosity products were found to have insufficient visibility. AR, Tab B, supra. Based on these field test experiences, the protester draws the more general inference that viscosity must be an important factor when considering visibility for any product, not just fugitive products. The protester, however, clearly takes this inference further than the record supports. Because fugitive products have inherently different visibility characteristics than iron oxide colored products, the protester's tenuous conclusions do not provide a basis for questioning the agency's judgment that it is not necessary to test the visibility characteristics of iron oxide products.

Corrosion Testing

Fire-Trol also argues that HV-R (3.1:1) and (3.6:1), MV-R, and LV-R should not have been qualified because there is evidence of HV-R having caused excessive corrosion of storage tanks when used in the field.¹¹ This challenge, however, is flawed in several respects. As an initial matter, it should be noted that each of the products challenged in this regard successfully passed the agency's laboratory corrosion tests, and the laboratory tests are the only corrosion qualification requirements under specification 5100-304b. Moreover, the agency performed corrosion testing on field samples of the HV-R products and these samples were found acceptable. The agency reasonably states that it does not make judgments about products based on field observations of corrosion in storage tanks because such conclusions would be inherently unreliable since, before a product is used, there is no way to know the tank's condition. Tr. 59-60. The agency notes that a storage tank's condition depends on a variety of factors, including where a tank is procured, its age, maintenance record, and what other products have been used in the tank in the past.¹² Tr. at 59-61. Given that these products all passed the agency's laboratory corrosion testing and in some instances corrosion testing of field samples, the unreliable anecdotal evidence concerning corrosion found in field tanks after they

¹¹ As support for its argument, the protester cites a study by the Colorado School of Mines, which was conducted at the agency's request, examining the corrosiveness of HV-R. This study, however, does not contradict the relevant laboratory corrosion test results for HV-R, which were conducted pursuant to specification 5100-304b.

¹² The intervenor adds that storage tanks used in the field have often been in use for extended periods of time, in some instances as long as 30 years. See Intervenor Comments on Agency Report, Dec. 30, 2003, at 7 n.4. In addition, the intervenor notes that the retardant stored in these tanks changes frequently, often from one contract period to the next. Id.

had be used with HV-R, does not suggest that the agency acted in an arbitrary or unreasonable manner in qualifying HV-R, MV-R, or LV-R.

In addition, the protester argues that by qualifying these products the agency disregarded the fact that there were problems with corrosion test results performed on field samples. According to the protester, given the documented problems with these products, they should have been subjected to more extensive field testing for corrosion before being qualified. While it is true that samples of MV-R and LV-R taken from the field did not pass corrosion tests in 1991, the Forest Service determined that this was due to the fact that they were not being adequately recirculated, thus compromising the samples tested. Astaris and the agency, however, addressed the recirculation issue, and ultimately corrosion tests of field samples of HV-R (3.1:1) proved satisfactory, leading to the qualification of HV-R by 1994. See AR, Tab C, supra. Given the positive results with HV-R, which, in its mixed form, is essentially the same as MV-R and LV-R, it was reasonable for the agency to determine that further field testing of these products for corrosion was unnecessary.¹³ See AR, Tab I, supra.

Air-drop Testing

The agency states that it did not air-drop test any of the products at issue because they are all gum-thickened and all gum-thickened products are considered sufficient. While recognizing that air-drop testing “is discretionary with respect to any particular retardant,” the protester maintains that the agency should have air-drop tested MV-R because the agency did not have enough experience with the aerial delivery of this product, and it should have tested LC-95A and LC-95D because the agency does not have any experience with similar gum-thickened products. Protester’s Response to Documents, Astaris Comments, and Supplemental Agency Report, Dec. 31, 2003, at 21, 28-29. We view the protester’s challenges in this regard

¹³ The protester argues that due to the prior problems with LV-R in terms of corrosion, the agency should have tested for corrosiveness during its operational field evaluation of LV-R. The protester also suggests that the agency improperly attempted to minimize corrosion problems with LV-R by coating or painting the inside of the storage tanks during the course of the agency’s field test of LV-R. As explained above, it was reasonable for the agency to conclude that field testing of LV-R for corrosion was unnecessary given that HV-R had been successfully field tested for corrosion. Because testing for corrosion was not part of the LV-R field evaluation, protester’s allegations about coating of tanks, which may have minimized corrosion, are not relevant. Moreover, protester’s concerns about the coating of tanks are unfounded since the agency testified that it is not an unusual practice. Tr. at 417. According to the agency, many of the tanks used by bases are recycled and it is for the base and the contractor to decide whether to coat the storage tanks. Id.

as mere disagreement with the agency's conclusions, which is insufficient to render those conclusions unreasonable.

Operational Field Evaluation Testing

With regard to LV-R, Fire-Trol argues that this product was improperly qualified because it failed to demonstrate its ability to maintain adequate viscosity when tested during the course of a monitored operational field evaluation.¹⁴ The agency recognized that in some instances the test results for LV-R samples revealed very low viscosity levels; however, upon further inquiry, the agency determined that these low levels were not due to problems with the product. Tr. at 366. In some instances too much water had been mistakenly mixed with the product, decreasing its viscosity. Tr. at 362. The agency also determined that in some instances the product had been mixed with what it believed to be contaminated water (water from untreated lakes or ponds), which can degrade the gum-thickener and decrease viscosity. Tr. at 215-16. Moreover, the record reflects that in many instances the samples tested had satisfactory viscosity levels. See AR, Tab DV, Operational Field Evaluation Results. Given this record, there is nothing to suggest that the agency abused its discretion in qualifying LV-R based on the results of its monitored operational field test.

Turning to LC-95A and LC-95D, the protester asserts that these products should have been subjected to operational field testing. Field testing of these products was not required because they were determined to be similar to LRA, which had been successfully field tested. The protester maintains, however, that unlike LRA, LC-95A and LC-95D were gum-thickened and that they had a different corrosion inhibitor than LRA. The agency specifically considered these differences and determined that field testing was not required.¹⁵ AR, Tab AH, supra. Again, the protester merely

¹⁴ The protester also raises concerns about the recirculation and mixing of LV-R and MV-R, highlighting the recirculation problems with these products during field testing in 1991 and the fact that the field evaluation test plan for LV-R indicated that recirculation and mixing of the product would be evaluated. The agency concedes that recirculation of these products has been "an intermittent problem." AR, Tab I, supra. However, because recirculation is subject to many factors, the agency determined that it would conduct "targeted, extensive" lot assurance and quality assurance (LAQA) testing during the first season of field use of these qualified products. Id. It should be noted that recirculation or mixing of the product is not a qualification requirement per se and that these products all passed the specification's storability testing requirements. Consequently, there is nothing to suggest that the agency acted unreasonably in deciding to qualify these products and address the recirculation issues through the LAQA process.

¹⁵ For example, because the laboratory corrosion tests for the products were "very good," the agency concluded that additional field corrosion tests were unnecessary. Tr. at 193.

presents its disagreement with the agency's considered judgment that further testing was not necessary for these products, and such disagreement will not serve as a basis for us to question the agency's actions.

Inclusion of Patent Indemnity Clause

As a final matter, Fire-Trol challenges the agency's inclusion of a patent indemnity clause (FAR § 52.227-3), arguing that it was improperly included in the solicitations since the products are not sold to the general public in the commercial market. The clause at issue protects the government from liability for patent infringement by requiring a contractor to reimburse the government for liability for infringement resulting from performance of the contract. FAR § 27.203-1. With respect to the circumstances under which the provision may not be used, FAR § 27.203-1 expressly states as follows (emphasis added):

(b) A patent indemnity clause shall not be used in the following situations: . . .

(2) When the contract is for supplies or services (or such items with relatively minor modifications) that clearly are not or have not been sold or offered for sale by any supplier to the public in the commercial open market.

Given the use of the term "clearly," the FAR sets a high threshold for determining that a patent indemnification clause cannot be used. Thus, if it is not clear that the government is purchasing a product that has not been sold or offered for sale to the public in the commercial market, the prohibition against the use of FAR § 52.227-3 would not apply.¹⁶

In this case, the agency acted reasonably by including the FAR provision. As an initial matter, the agency highlights the fact that Astaris sells the very products at issue in this case to a commercial company, Hunot Retardant Company.¹⁷ See

¹⁶ The FAR does not define the terms "public" or "commercial open market." Thus we are left to apply the ordinary meaning of these terms and in so doing conclude that they would encompass sales to non-governmental entities in arm's-length commercial transactions.

¹⁷ The protester argues that Astaris's sales to Hunot are not sales to the public in the commercial market because Hunot resells Astaris's products to the government for governmental use. FAR § 27.203-1, however, pertains only to the circumstances of the sales of products, not to how a product is ultimately used. Thus, the fact that products sold in commercial transactions are ultimately used by the government is irrelevant to the question of whether the products have been sold or offered for sale to the public in the commercial market. This issue is distinct from the issues concerning "commercial item" acquisitions, since commercial items are expressly
(continued...)

Contracting Officer's Statement at 1. The agency also notes that the solicitation is for the purchase of chemical-based, water-soluble fire retardants and cites various advertisements for such retardants that are sold for use on homes or with live trees. One such advertisement states, "Protect your home with the same powerful fire retardant used by the U.S. Forest Service." Agency Response to Protester's Comments at 9. Moreover, the intervenor notes that it has sold its fire retardant products to timber companies in Chile as well as the United States, and adds that Fire-Trol has sold its fire retardant products to timber companies in Chile as well. See Decl. of Business Director, Fire Safety, for Astaris, Jan. 5, 2003. While the protester contends that in many cases the cited products are different from the products contemplated under the solicitation because they are not for use from fixed-wing aircraft (noting that they therefore would not be gum-thickened or contain iron oxide or corrosion inhibitor) or because they are not listed on the QPL, the agency emphasizes the fact that the cited products are all chemical-based, water-soluble fire retardants.¹⁸ Because the record reflects that the solicitations are for the procurement of products that have been sold to or offered for sale to commercial entities in arm's-length commercial transactions, the agency did not act unreasonably by including the patent indemnification clause in the subject solicitations.

The protests are denied.

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General Counsel

(...continued)

defined by whether they are for governmental purposes or governmental use.
FAR § 2.101 (defining commercial item).

¹⁸ Moreover, it should be noted that a product's thickener, colorant, and corrosion inhibitor make up a small fraction of a product in its mixed form. The primary ingredients of a mixed product, by weight, are the active salts (in addition to water, of course), and the primary use of the products is fire suppression. Thus, there is nothing to suggest that changes in thickeners, colorants, and corrosion inhibitors, are anything other than "relatively minor modifications" as contemplated under FAR § 27.203-1(b)(2).