January 17, 2013

European Commission, DG SANCO
Unit SANCO/D/6
DM24 02/36
BE-1049
Brussels
via email: sanco-logo-falsified@ec.europa.eu

Dear Sir or Madam:

LegitScript appreciates the opportunity to submit comments on the consultation paper released 17 October 2012 entitled, "Implementing Act on a Common Logo for Legally-Operating Online Pharmacies/Retailers Offering Medicinal Products for Human Use For Sale at a Distance to the Public."

Our comments are provided in two primary parts: first, background information on LegitScript's expertise as relevant to these comments, and second, recommendations regarding the technical, electronic and cryptographic requirements for verification of the authenticity of the common logo.

Thank you for considering our feedback. Please do not hesitate to contact me should you have any questions about our comments or if you would like any additional information. LegitScript supports the EU Commission's mission, and welcomes the opportunity to assist with this or other matters in whatever way would be most helpful.

Yours Truly,

John C. Horton
President, LegitScript

I.   Background Information About LegitScript

LegitScript maintains the world's largest database, to our knowledge, of online pharmacies. Headquartered in Portland, Oregon in the United States, LegitScript operates on a global scale, including in the European Union, where we identify, analyze, classify by legitimacy (and, where applicable, by associated criminal network), and monitor online pharmacies offering to sell medicinal products to humans in the EU, North America, Asia and other regions. LegitScript is a private company but is endorsed by the National Association of Boards of Pharmacy (NABP), which represents the government agencies that license and regulate pharmacies and pharmacists in the US, Canada, Australia and New Zealand, for the purpose of classifying Internet pharmacies as legitimate or not legitimate, and assisting search engines, domain name registrars, Internet service providers, credit card companies, and other Internet and financial platforms in determining whether a particular Internet pharmacy is operating legally in the jurisdictions where the website offers to dispense prescription drugs or serve patients.[1]

LegitScript maintains a staff in the European Union and also provides services in the European Union, where, for example, we monitor Google's healthcare online pharmacy advertisements for rogue online pharmacies targeting customers in the United Kingdom, Ireland, France, Germany, Italy, Spain, Russia and the Netherlands, and monitor Google's social media outlet, Google+, for illicit online pharmacy profiles throughout the European Union. We are in the process of expanding our monitoring for illicit online pharmacy merchants to include Google Shopping in the European Union. Additionally, LegitScript notifies and serves as a resource to domain name registrars around the world, including several in the European Union. LegitScript has, for the last several years, assisted with Operation Pangea, an international effort led by INTERPOL to shut down rogue online pharmacies, and also maintains a close working relationship with EU drug safety authorities. For example, LegitScript has been referred to by the Irish Medicines Board as the "appropriate authority" to which rogue Internet pharmacies should

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[1] http://www.legitscript.com/download/
NABP_Recognition_LegitScript_International_Internet_Pharmacy_Standards_2012.pdf, also attached

be reported.[2] We also assist other EU regulatory agencies such as the Italian Medicines Agency (AIFA) in identifying and analyzing the online sale of medicines.

LegitScript maintains an online pharmacy certification program that is currently offered as a free public service. With 255 legitimate online pharmacy websites, it is currently the largest online pharmacy certification program in the United States. Although historically focused on the US market, LegitScript released international standards in December 2012 that are intended to be applicable in the EU, Asia and other regions worldwide. LegitScript offers the use of a certification logo for legitimate Internet pharmacies that is centrally controlled by LegitScript and can be toggled "on" or "off," for example, in the event that the online pharmacy is no longer in compliance. The system we have in place has largely or entirely prevented against unauthorized copying or misuse of the logo.

II.   Technical, Electronic and Cryptographic Requirements for Verification of the Authenticity of the Common Logo

Ensuring that the common logo is not copied or used without permission is a critical objective in order to protect patient safety and ensure that the logo's trustworthiness is not diluted. In short, Internet users should have as high a degree of confidence as possible that if they see a website displaying the common logo, the online pharmacy is, in fact, operating legitimately in the EU.

Before discussing the technical, electronic and cryptographic requirements that LegitScript would suggest be considered, it is worth emphasizing the extent to which the use of a common logo will instantly become a high-value target of rogue Internet pharmacies. To cite one example, LegitScript monitors, and has shut down thousands of websites that are part of, a Russian rogue Internet pharmacy network commonly known as EvaPharmacy in the underground world. These websites, which are known to sell counterfeit medications, do not require a prescription, and lack required pharmacy licenses. The hallmark of this particular rogue online

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[2] http://www.irishexaminer.com/ireland/kfcwmhgbmhid/rss2/

pharmacy network is the continuing display of forged pharmacy licenses and fake pharmacy certification logos. Consider, for example, the lower part of the home page for canadianhealthcaremalldiscount.com, a rogue Internet pharmacy in the EvaPharmacy organized crime network, shown below:
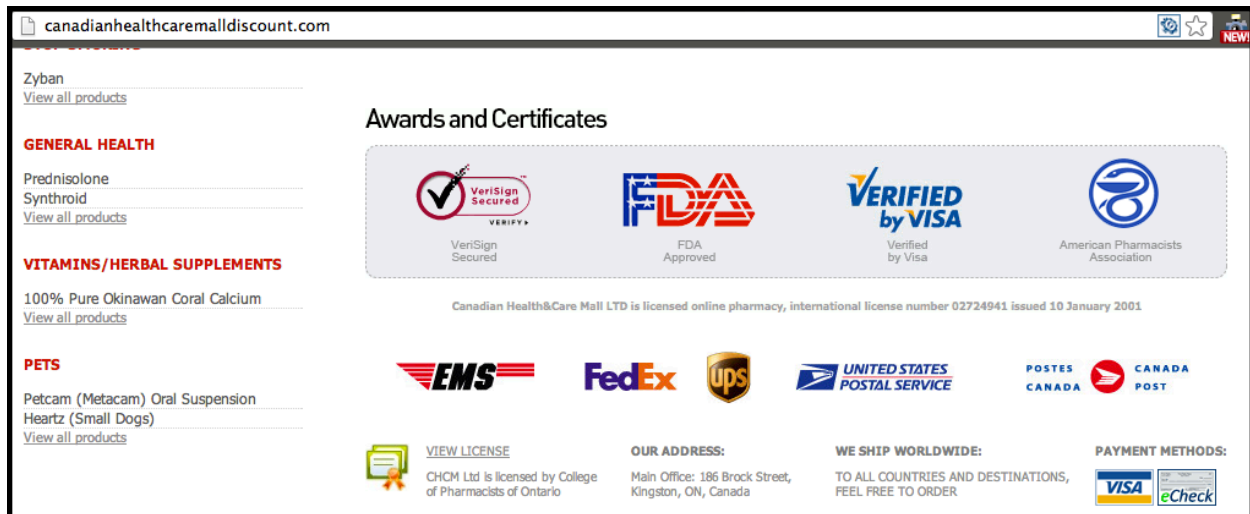
At the bottom of the web page displayed above are several logos: Verified by Verisign; the US FDA; Verified by VISA; the American Pharmacists Association; EMS, FedEx, UPS, USPS and Canada Post; and a clickable link to a pharmacy license in the Canadian province of Ontario. All of the logos are used without permission (none are valid), and the pharmacy license is a forgery. LegitScript has documented tens of thousands of these and similar websites in this network, all displaying falsified logos or logos used without permission.

To make matters worse, EvaPharmacy is but one of about 150 to 200 rogue Internet pharmacy networks, each of which have anywhere from a handful up to 25,000 or more rogue Internet pharmacy websites. Not all of them copy and misappropriate logos, but it stands to reason that if an online pharmacy is willing to sell falsified medicines, they may not hesitate to display a falsified logo. The EU Commission is therefore wise to prioritize the question of technical security for the logo.

Because LegitScript operates a free Internet pharmacy certification program and logo, we have also researched the question of how to best prevent the unauthorized display of our logo. To the best of our knowledge, LegitScript's logo has rarely been misused or copied. The key to this, we believe, are the following elements:

- First, the logo is assigned to a unique domain name, not to a brick-and-mortar pharmacy. From a purely technical perspective, an online pharmacy is, in fact, simply a website: by contrast, the pharmacy itself is inherently an "offline" entity. Because it is the website, not the offline pharmacy, that displays the logo, there should be a one-to-one ratio between a specific logo and the website that is authorized to display that logo, rather than providing permission to the pharmacy to display the logo on any website it currently or in the future operates.

- Second, the logo must be dynamic, not static, and must be controlled by a console operated by the EU Commission. We specifically suggest java script for this purpose.

- Third, the image should be created dynamically with the logo image hosted on the EU Commission's servers (as opposed to simply providing the java script to be hosted on the online pharmacy's servers). This enables the EU Commission to maintain control over the logo and turn it off if necessary, for example, if the online pharmacy is found to be out of compliance. Additionally, if the image is actually hosted on the online pharmacy's own servers, it will become technically difficult for the EU Commission to assure control over the security of the logo and prevent hijacking or misuse. (Use of java script, as suggested above, can easily allow for the online pharmacy website to simply "call to" the EU Commission's servers to display the logo image.)

- Fourth, the logo should be date stamped with the current "today" date, which is a signal that the online pharmacy is authorized to use the logo as of the immediate date; the presence of an earlier date in the logo is an immediate symbol that the use of the logo is

not authorized. The use of java script to create a dynamic seal hosted on the EU Commission's own servers permits the date to be updated every 24 hours automatically.

- Fifth, the logo must point back to a dedicated page within the EU commission's website for that specific domain name that references the licensed pharmacy. It should not point back to a dedicated page for a specific pharmacy, but rather a page for a website name that is identified by the EU Commission as being a *bona fide* presence for the licensed pharmacy.

  For example, if the legitimate online pharmacy is safemedicine.de, then the logo itself would contain today's date and the text "safemedicine.de", and link to a dedicated page within the EU Commission's website that specifically reads "safemedicine.de" at the top of the page.

- If the steps above are taken, attempted spoofing or unauthorized use of the logo can be detected by ensuring that visits to the dedicated page for the online pharmacy (e.g., the dedicated page for safemedicine.de within the EU Commission's website) only originate from (using this example) safemedicine.de itself. It is technically feasible to identify other websites from which the click-throughs originate and thus identify misuse of the logo if it is attempted.

Example of Rogue Internet Pharmacy Misappropriating GPhC Internet Pharmacy Logo

To further illustrate why the steps above are necessary to ensure the technical security and integrity of the logo, consider the following. LegitScript recently notified appropriate regulatory authorities and the applicable domain name registrar about several rogue Internet pharmacy websites, including eupharmacist.com, displaying a fully operational "Registered Pharmacy" seal from the United Kingdom's General Pharmaceutical Council's online pharmacy registration program, as shown in Appendix A (full image captured on January 9, 2013 and

attached to these comments). The websites have since been shut down. The misappropriated[3] logos displayed on eupharmacist.com and similar rogue Internet pharmacies was:
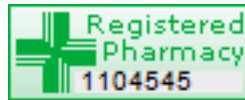
   The approved website for display of the GPhC logo above with the license number 1104545 is natcol.co.uk, an online pharmacy in the United Kingdom — not eupharmacist.com or other websites. The logos used by the rogue Internet pharmacies, such as eupharmacist.com, were fully operational (clickable) and linked to the web page in the GPhC database displaying the same pharmacy license number (1104545). For this reason, it can be seen that some Internet users could easily have been misled into believing that the websites including eupharmacist.com were approved by the GPhC, when in fact they were not.

   It is worth noting that the GPhC's logo program does not contain all of the protective mechanisms described earlier in this letter, which enabled the rogue Internet pharmacy network to misappropriate the GPhC logo for natcol.co.uk.

Conclusion

   The technical integrity of the common logo is of paramount importance to ensure that Internet users see the EU Commission common logo as trustworthy, and are not misled by rogue online pharmacies seeking to capitalize on the EU Commission's good reputation. While it may not be possible to absolutely ensure that no rogue online pharmacy networks will ever successfully subvert the EU Commission's logo, there are several technical and policy steps that can be taken to dramatically minimize it, quickly identify the subversion and facilitate a quick response. LegitScript believes that the suggestions offered above accomplish two objectives:

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[3] It is, of course, important to consider the possibility that the GPhC-approved pharmacy colluded with or granted approval to the rogue Internet pharmacy network. LegitScript emphasizes that we have no reason to think that this is the case. However, part of an online pharmacy verification and certification program should include reviewing and hopefully ruling out these potential connections.

first, it makes it much more difficult for rogue online pharmacies to compromise the integrity of the logo; and second, it simplifies the process of identifying any misuse of the logo.

LegitScript supports the mission of the EU Commission and the common logo, and would welcome the opportunity to provide additional information or explanation regarding the content of this memorandum. Please do not hesitate to contact me directly to contact any of these matters further. We hope that the EU Commission will consider LegitScript both a supporter and a resource as the common logo is developed and implemented.