Luzenac

November 30, 2000

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Via Federal Express

Dr. Mary S. Wolfe
NTP Board of Scientific
Counselors, RoC Subcommittee
BLDG 101, Room A322
111 T.W. Alexander Dr.
Research Triangle Park, NC 27709
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Re: Talc Nominations – 10th Report on Carcinogens

Dear BSC Subcommittee Members:

Luzenac America is a leading producer of high quality talc products for both the consumer and industrial markets. As such, the National Toxicology Program's (NTP) review of "**talc not containing asbestiform fibers**" is of great consequence to Luzenac, as well as the talc industry worldwide. In conducting a thorough evaluation of the NTP Talc Draft Background Document and the conclusions of NTP Review Groups 1 & 2, Luzenac respectfully files the following objections with the NTP Board of Scientific Counselors Subcommittee:

1. A critical error in the fundamental logic of the NTP's own line of argument categorically invalidates the NTP conclusion.

2. The NTP disregarded the unanimous finding of a comprehensive 1994 FDA workshop that there is no public health hazard associated with cosmetic talc. The FDA experts also concluded that an animal study, relied upon heavily by the NTP, was seriously flawed and not relevant to any expected human exposure.

3. The Draft Background Document makes no reference to one of the most recent and relevant authoritative articles on this subject which supports the view that cosmetic talc is safe.

4. The Draft Background Document makes no reference to the most comprehensive study of prolonged worker exposure to talc in the workplace.

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5. The issue of talc pleurodesis was completely ignored by the NTP.

6. The Draft Background Document is confused and conflicted on the critical issue of asbestos contamination in talc products.

Objection 1

A critical error in logic exists in the Draft Background Document for Talc Asbestiform and Non-Asbestiform. The error unequivocally invalidates the conclusion proposed by RG1 and RG2 that "Talc **not containing asbestiform fibers** is reasonably anticipated to be a human carcinogen."

The error is as follows:

- NTP finds "**the widespread contamination** of talc and commercial talc products **with asbestiform** minerals."
- NTP finds talc associated with epidemiological studies "**must be assumed...**(to) **contain asbestos fibers**."
- Based on the above, NTP concludes on the carcinogenicity of "**talc not containing asbestiform fibers**." (emphasis added)

In other words, the NTP reaches a conclusion on **talc not containing asbestiform fibers** based on its interpretation of evidence of the use of talc, which talc, the NTP itself asserts, must be considered to be **widely contaminated with asbestiform fibers**.

In attempting the task of summarizing a review of "talc containing asbestiform fibers" along with "talc not containing asbestiform fibers", the NTP reviewers were faced with assessing the carcinogenicity of talc in studies in which the mineral content was inadequately characterized. The reviewers responded in Section 3.3 as follows:

> **3.3 Talc containing asbestiform fibers and talc not containing asbestiform fibers**
>
> **"The limited information in the literature on talc mineralogy and asbestos content poses a key challenge in assessing carcinogenicity."**
>
> **"Neither occupational studies ... nor the extensive literature concerning cancer and perineally applied talcum powder provide any characterization of talc mineralogy or morphology that could be used to determine the effects of different kinds of talc. However, because of the widespread contamination of talc and commercial talc products with asbestiform minerals, it must be**

> **assumed that "talc" without further specification of mineralogy or morphology may contain asbestos fibers. The weight of the evidence thus indicates that it would be prudent to regard such undifferentiated talc materials as carcinogenic.**"

Section 3.3 goes on to conclude:

> "the evidence from studies of ovarian cancer suggests that talcum powder is a carcinogen."

By the NTP reviewers' own assertion, "talcum powder", i.e. "undifferentiated talc", "must be assumed..(to) contain asbestos fibers." Therefore, based upon the reviewers' own arguments, the NTP's conclusion cannot be valid for "talc not containing asbestos fibers."

Section 3.3 also concludes:

> "the evidence from studies of occupational exposure to **non-asbestos-containing talc** is **not** sufficient to support a conclusion that this form of talc is **carcinogenic**."(emphasis added)

Luzenac America certainly agrees that the studies in which the talc was clearly identified as not containing asbestos do not support any conclusion of carcinogenicity.

For the record, Luzenac does not believe the evidence, when viewed *in total*, suggests that talc in any form is associated with causal factors of ovarian cancer.

It is recommended that the Board of Scientific Counselors Subcommittee vote against the nomination of "talc not containing asbestos fibers" as a "reasonably anticipated human carcinogen".

It is also recommended that the Board of Scientific Counselors Subcommittee notify Review Groups 1 & 2 that their conclusion relative to talc not containing asbestos fibers is not supported by the data. The arguments and assumptions made by the reviewers in the text of the Draft Background Document **unquestionably contradict** their own conclusion about "talc not containing asbestos fibers."

It is clear that the premise on which NTP has assessed the literature and safety issues relating to all forms of talc is seriously faulted and cannot be used as a reasonable basis for nomination as an anticipated human carcinogen.

Objection 2

The 1994 FDA/ISRTP workshop examined the NTP Lovelace study on talc and concluded that the **positive talc bioassay results were** likely an experimental artifact and

a nonspecific generic response of dust overload of the lungs and **not a reflection of a direct activity of talc**. **This was a unanimous assessment** of the workshop.

Additionally, the workshop identified several key shortcomings of the Lovelace study which further discredit its validity;

- the talc utilized was an ultra-fine, not cosmetic talc;
- the target aerosol concentrations were not maintained during 19 of the 113 to 122 weeks of the study;
- a seven-week malfunction of the aerosol generator led to an exposure excursion of nearly twice the intended target.

Clearly, as the FDA/ISRTP experts concluded, the results of this animal study cannot be utilized for either scientific or regulatory purposes. However, the reviewers for the Draft Background Document ignored these critical findings by the FDA/ISRTP experts.

It is recommended that the Board of Scientific Counselors Subcommittee reject the conclusion in Section 4.1.1.1 of the Draft Background Document that the NTP Lovelace study "provides evidence for carcinogencity of non-asbestiform talc in male and female rats."

Objection 3

The Draft Background Document fails to make any reference to the December 1998, "Journal of Comments on Toxicology - Talc – A Special Issue." This comprehensive reference source, submitted during the first public comment period on behalf of the CTFA, was totally ignored by the reviewers of the Background Draft Document in the preparation, discussion, and review of talc not containing asbestiform fibers. Within the special issue, the Guest Editor, Alfred P. Wehner, D.M.D, Sc.D., F.A.T.S., presents relevant, objective reviews of published talc studies that would have provided the NTP reviewers with invaluable insight and analysis contrary to the ultimate NTP findings.

It is recommended that the Board of Scientific Counselors Subcommittee instruct the revision of the Draft Background Document to include reference and discussion of the "Journal of Comments on Toxicology - Talc – A Special Issue."

Objection 4

The Draft Background Document fails to make any reference to the comprehensive study of French talc workers entitled "An Epidemiological Mortality Study in the Talc Producing Industry", Wild P., Institut National de Recherche et de Securité, June 2000, p1-73 (in French). A copy was submitted to NTP, preceded by an official Executive Summary in English.

This study focuses on the largest talc mine and milling plant in the world with mortality in the cohort tracked from January 1945 to December 1996. It is the follow-up of a survey previously conducted on the same population, the results of which are published

as "Survey of the respiratory health of the workers of a talc producing factory", Wild P. et al, Occup. Environ. Med., 1995, 52, p470-477.

The Draft Background Document states "No available study of workers exposed to talc includes quantitative individual-level data on the level of exposure...." On the contrary, the data presented in these Wild P. studies do provide this, and significant evidence that talc not containing asbestos is not a human carcinogen.

It is recommended that the Board of Scientific Counselors Subcommittee instruct the revision of the Draft Background Document to include reference and discussion of the evidence provided in these significant and pertinent studies of European talc workers.

Objection 5

Additional evidence that cosmetic talc is *not* carcinogenic can also be found in a review of the literature relating to talc pleurodesis. Pleurodesis is the deliberate therapeutic creation of a fibrous adhesion between the visceral and parietal layers of the pleura. It is performed surgically by inserting talc into the pleural canal to treat recurrent spontaneous pneumothorax and other conditions. There is not a single report in the scientific literature suggesting that inhalation of cosmetic talc causes lung cancer or mesothelioma in consumers. Pleurodesis has not caused any such lesions in approximately 200 patients up to 40 years after the procedure (Chappell et al, 1979; Weissberg and Kaufman, 1986).

The issue of talc pleurodesis was completely ignored in the Draft Background Document.

It is recommended that the Board of Scientific Counselors Subcommittee instruct the revision of the Draft Background Document to include a review of talc pleurodesis and the absence of any association of carcinogenicity in humans.

Objection 6

The Draft Background Document provides an utterly confusing and conflicting representation of the purity and composition of commercial talc products, particularly as related to asbestos contamination in personal care and cosmetic talcs. Luzenac, along with the world talc community, vigorously objects to this broad misrepresentation of talc, as it might falsely alarm consumers and regulators alike about the safety of talc.

As pointed out in the Draft Background Document, it was precisely because of the uncertainty of the composition of talc products in the 1960's and 1970's, that the talc industry began working closely with industry trade associations and government agencies to develop talc specifications to ensure the absence of asbestos and asbestiform fibers. As a result of these initiatives, talc producers now routinely employ strict quality control procedures to ensure talc products can be certified to be free from asbestos and asbestiform fibers.

It is recommended that the Board of Scientific Counselors Subcommittee instruct the revision of the Draft Background Document to include a more definitive declaration of the composition and purity of talc products from what was suspected prior to 1976, as

contrasted with the products that the talc industry produces and certifies in today's marketplace.

Luzenac America appreciates the opportunity to provide the Board of Scientific Counselors Subcommittee with these facts and comments.

Sincerely,

Richard Meli
President
Luzenac America, Inc.