UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C., 20460

OFFICE OF CHEMICAL
SAFETY AND POLLUTION
PREVENTION

June 26, 2020

MEMORANDUM

SUBJECT: Materials for Review by Human Studies Review Board for the July 21-22, 2020 Meeting

TO: Thomas O'Farrell
Designated Federal Official
Human Studies Review Board
Office of Science Advisor

FROM: Michelle Arling
Human Research Ethics Review Officer
Office of the Director
Office of Pesticide Programs

This memorandum identifies the materials that the Environmental Protection Agency's (EPA's) Office of Pesticide Programs is providing for review by the Human Studies Review Board (HSRB or Board) at the teleconference and virtual meeting scheduled for July 21-22, 2020. During the July discussion, EPA will ask the Board to respond to specific science and ethics questions focused on the research identified below.

1. A completed study of laboratory-based testing of a tick repellent containing Oil of Lemon Eucalyptus (OLE), submitted by the ARCTEC (Arthropod Control Product Centre) and by sponsored by Citrefine International
2. A study protocol submitted by the Antimicrobial Exposure Assessment Task Force II (AEATF): "A Study for Measurement of Potential Dermal and Inhalation Exposure During Pressurized Hand-Wand Spraying" (AEA14)

1) Completed Study: "Single group trial to determine the complete protection time of an insect repellent formulation containing 30% Citriodiol ® (Oil of Lemon Eucalyptus) against three species of ticks"

EPA has reviewed this report summarizing research to determine a typical consumer dose for a pump spray skin-applied repellent and for laboratory testing to evaluate a repellent containing 30% OLE against three species of ticks. The HSRB reviewed the protocol for this research on April

24, 2018. The EPA review evaluates the scientific aspects of the proposed research for an efficacy study to assess complete protection time of the skin-applied repellent against OPP's guidelines (OSCPP 810.3700) and against previous recommendations from the HSRB. Ethical aspects of the proposed research are assessed in terms of the standards defined by 40 CFR 26 subparts K and L. The data collected in the study will be used to support product registration. The research has societal value because people are at risk of contracting tick-borne diseases, and the data supporting currently registered skin-applied repellents do not show the efficacy of this product.

The charge questions for the HSRB's consideration are provided below:

Charge to the Board - Science:

- Did the research summarized in "Single group trial to determine the complete protection time of an insect repellent formulation containing 30% Citriodiol ® (Oil of Lemon Eucalyptus) against three species of ticks" generate scientifically reliable data, useful for deriving a typical consumer dose and estimating the amount of time the product tested repels ticks?

Charge to the Board - Ethics:

- Does the available information support a determination that the research was conducted in substantial compliance with procedures at least as protective as those in the applicable requirements of 40 CFR part 26, subparts K-L?

Documents: EPA is providing for HSRB review the following documents:

a) Science Review of a Protocol for Laboratory Evaluation of Skin-Applied Tick Repellent Product Containing OLE (BPPD REVIEW 84878-2(457664) 20200622.pdf)
b) Ethics Review of a Protocol for Laboratory Evaluation of Skin-Applied Tick Repellent Product Containing OLE
c) Study report "Single group trial to determine the complete protection time of an insect repellent formulation containing 30% Citriodiol ® (Oil of Lemon Eucalyptus) against three species of ticks." **Note**: This will be a single folder containing 28 volumes for a total of 4562 pages.
d) LSHTM Ethics Committee Terms of Reference
e) April 24-26, 2018 EPA HSRB Meeting Report

2) A protocol submitted by the Antimicrobial Exposure Assessment Task Force II (AEATF): *"A Study for Measurement of Potential Dermal and Inhalation Exposure During Pressurized Hand-Wand Spraying of Antimicrobial Products"* along with "Study Addendum: Addition of Electrostatic Sprayers" (AEA14)

EPA has reviewed this protocol and associated documents for a measuring dermal and inhalation exposure to an antimicrobial pesticide when paint is applied using hand-wand sprayers or electrostatic sprayers from both scientific and ethics perspectives. Scientific aspects of the proposed research are assessed in terms of the recommendations of the EPA

Guidelines Series 875. Ethical aspects of the proposed research are assessed in terms of the standards defined by 40 CFR 26 subparts K and L. This protocol and ESS Addendum propose to evaluate potential dermal and inhalation exposure to both consumers and occupational workers during the spraying of surfaces using an antimicrobial product in the following three main scenarios:

(1) outdoor spraying (e.g., siding on buildings/sidewalks),
(2) indoor "dry" environments (e.g., indoor living areas/sanitizers/disinfectants), and
(3) indoor "wet" environments (e.g., food & beverage/livestock/animal housing).

The AEATF-II submitted the study protocol to EPA in early March 2020. Later, the AEATF-II submitted to EPA the Electrostatic Sprayer (ESS) Addendum, dated June 2, 2020, to specifically address the interest in the use of these types of sprayers for SARS-CoV-2, the virus that causes COVID-19. EPA intends to use these data developed by the AEATF II these scenarios to describe typical occupational and consumer exposure to antimicrobial pesticides applied in these manners. The research has societal value because the existing data used to estimate exposure are incomplete and do not reflect current practices.

The charge questions for the HSRB's consideration are provided below:

Charge to the Board - Science:

- Is the protocol "A Study for Measurement of Potential Dermal and Inhalation Exposure During Pressurized Hand-Wand Spraying of Antimicrobial Products" and the "Study Addendum: Addition of Electrostatic Sprayers" likely to generate scientifically reliable data, useful for assessing the exposure of those who apply products containing antimicrobial pesticides using hand wand or electrostatic sprayers?

Charge to the Board - Ethics:

- Is the research proposed in the protocol "A Study for Measurement of Potential Dermal and Inhalation Exposure During Pressurized Hand-Wand Spraying of Antimicrobial Products", the "Study Addendum: Addition of Electrostatic Sprayers" and related documents likely to meet the applicable requirements of 40 CFR part 26, subparts K and L?

Documents: EPA is providing for HSRB review the following documents:

a) Science and Ethics Review of AEATF II Pressurized Hand-Wand and Electrostatic Spraying Scenarios Design and Protocol for Exposure Monitoring (dated June 22, 2020)
b) Submission Package AEA14 Vol 1 – Transmittal Letter, 40 CFR 26.1125 Checklist for Study AEA14, Pressurized Hand-Wand Study Design Document
c) Submission Package AEA14 Vol 2 - Study Protocol, ICFs, Recruiting Materials, IRB Approval Letter, Supporting Documents
d) Submission Package AEA14 Vol 3 – Records of IRB Review of Study AEA14, IRB Meeting Minutes
e) Submission Package AEA14 Vol 4 – CVs and Ethics Training Records, SOPs

Referenced in AEA14 Protocol

f) AEA14 Study Addendum: Addition of Electrostatic Sprayers 06 02_2020

g) AEA14 Updated Test Substances and Rate 6_17_2020

h) EPA-Advarra email 6-16-2020

i) Rosenheck Protocol Approval with Modifications Notice Feb2520 - Revised Jun1620