STATUS DECISION OF CONTROLLED AND NON-CONTROLLED SUBSTANCE(S)

Substance:  I - Fentanyl N-oxide
           II - Pyruvyl fentanyl
           III - Butyryl Fentanyl

Based on the current information available to the Office of Controlled Substances, it appears that the above substance is:

Controlled ☑️
Not Controlled ☐

under the schedules of the *Controlled Drugs and Substances Act* (CDSA) for the following reason(s):

- The substances are degradation products of fentanyl and included under item 16(5) of Schedule I to the CDSA.

Prepared by: ________________________ Date: Dec 2nd 2010
Evelyn Soo

Verified by: ________________________ Date: _____________
Marianne Tang

Approved by: ________________________ Date: _____________
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: Wissam Sader
Drug Status Report

**Drug:**
- I - Fentanyl-N-oxide
- II - Pyruvyl Fentanyl
- III - Butyryl Fentanyl

**Drug Name Status:**
- I - Fentanyl–1-N-oxide
- II - Pyruvyl Fentanyl
- III - Butyryl Fentanyl are the common names.

**Chemical Name:**
- I - N-(1-phenethyl-4-piperidyl)propionanilide, 1-oxide
- II - 2-oxo-N-(1-phenethyl-4-piperidyl)-N-phenyl-propanamide
- III - N-(1-phenethyl-4-piperidyl)-N-phenyl-butanamide

**Chemical structure:**

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<tr>
<td><img src="image1" alt="Chemical structure I" /></td>
<td><img src="image2" alt="Chemical structure II" /></td>
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<td><img src="image3" alt="Chemical structure III" /></td>
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**Molecular Formula:**
- I - $C_{22}H_{28}N_2O_2$
- II - $C_{22}H_{26}N_2O_2$
- III - $C_{23}H_{30}N_2O$

**CAS-RN:**
- I - 85893-37-4
- II - NONE
- III - NONE

**Pharmacological class / Application:** Degradation products of fentanyl

**International status:**
US: The above substances are not currently listed in the schedules to the CSA and are not mentioned anywhere on the DEA website.

United Nations: The substances are not listed on the Yellow List - List of Narcotic Drugs under International Control, the Green List - List of Psychotropic Substances under International Control, nor the Red List - List of Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control.
Canadian Status: The above substances are not listed in the CDSA. However, they have been reported in the scientific literature to be degradation products of fentanyl and therefore are captured under the heading “Fentanyl, their salts, derivatives, and analogues and salts of derivatives and analogues, including” of item 16 of Schedule I to the CDSA as derivatives of fentanyl. In addition, the above three substances contain the core structure of the fentanyls included under item 16 of Schedule I.

**Recommendation:** Fentanyl-N-oxide, pyruvyl fentanyl and butyryl fentanyl are included under item 16(5) of Schedule I to the CDSA and are controlled substances.

**Date:** 2 December 2010