

出國報告(出國類別：其他-參加回訓)

## 2015 美國加州 CSTI 拜訪

服務機關：國立雲林科技大學

姓名職稱：洪肇嘉教授

派赴國家：美國

報告日期：104.02.10

出國期間：104.01.21~01.23

## 摘要

本人自 2002 年起即到美國加州特別訓練機構 (California Specialized Training Institute 簡稱：CSTI) 參加的危害物事故 (Hazardous Material, HAZMAT) 的各種訓練取得外部訓練講師) 資格去年度因未及時於 2014 年底前提送資料，為爭取持續之資格本人於 2015 年 1 月 21 日至 1 月 23 日前往美國加州 CSTI 拜訪及回訓，爭取持續擁有講師之資格，已順利爭取延續資格，並了解未來發展資格之法令等，並也順利取得 2015 年開授課程資格。美國加州自 1970 年代及建立 CSTI HAZMAT 訓練，並推廣至民間可成為講師及開授課程，必需年年持續溫故知新技術及經驗，值得我國作為建立毒災或化災訓練制度之參考。

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## 一、目的

本人自 2002 年起即持續受訓擁有美國加州 CSTI (California Specialized Training Institute 簡稱：CSTI) (相關介紹如附件一) HAZMAT (Hazardous Material) 講師資格，每年 CSTI 都會舉辦課程回訓，希望其外部訓練講師能定期回訓並回報運用教材及開授課程狀況。透過回訓可了解講師受訓後的每年實踐與運用 HAZMAT 應變 12 項原則的狀況，同時可從中了解及審核講師身分資格認證。但因 2014 年底前未即時提送資料 (附件二)，而為爭取持續為講師資格以及可在臺灣開訓練班，本人於 2015 年 1 月 21 日至 1 月 23 日前往美國拜訪 CSTI 親自接洽。

## 二、過程

本人於 2015 年 1 月 20 日從臺灣啟程，並於 1 月 20 日夜抵達美國洛杉磯，21 日從洛杉磯開車至聖路易斯堡 (San Luis Obispo) 前往美國加州州長緊急服務辦公室之下屬加州專門培訓學院 (加州 OES/CSTI)。

表 1 此次出國行程表

日期	過程	註
1 月 20 日	出發桃園機場至 LA 機場	
1 月 21 日	從加州洛杉磯開車到 SLO，因塞車擁擠抵達時太晚 HAZMAT 部門聯繫人員已下班，無法接洽。 LA 至 SLO (路程 305 公里)	
1 月 22 日	至 CSTI HAZMAT 部門參訪並接洽是否參與回訓 (此次順利接洽，以 2014 年在臺灣參與環境事故應變諮詢中心經驗，教育訓練及授課等並及填寫文件替代此次回訓)	
1 月 23 日	SLO 開車回 LA	

加州 OES/CSTI 被認為美國有害物質事故應變 HAZMAT 首屈一指的培訓和教育訓練場地，CSTI 是根據加州政府法令§8574.20(五)授權提供發展培訓和認證 HAZMAT 標準化課程。而 CSTI 的 HAZMAT 課程超越的核生化事故應變訓練領域的國家培訓標準，且符合聯邦及加州法規之 HAZMAT 課程標準。於 1989 年開始已有超過 28 萬應變者自該課程畢業。目前也有 2000 多位教官在 CSTI 的推廣方案下認證，開展加州在 HAZMAT 訓練之蓬勃發展及高度能力，本人自 2003 年起也是其中一員。

合作夥伴關係上加州 OES 執行，協調和應變多種類型的情況，與當地應急機構，互助組織，消防和救援，HAZMAT，執法，志願者等合作，並關注國家級國土安全威脅之應變和報告一切可疑之活動。

## 區域業務

加州 OES 有三個行政區域，包括加州內陸，沿海和南部分別位於薩克拉門托 Sacramento，奧克蘭 Oakland 和洛杉磯 Los Alamitos，協調加州 EMA 責任地區和國家和地區層面 SEMS 間的信息和資源的聯絡，以確保本地應變之有效和高效。

## 當地應急機構

在重大突發事件，加州 OES 支持國家和地方政府機構，根據其專業能力和專業知識，提供應變資源支持及協助當地政府。例如：加州 OES 具有通信車，攜帶式衛星台，專用設備庫存，可派駐及根據需要派遣至標定國家戰略位置，協調全州消防，執法，與電信互助系統，協調國家的城市搜索與高風險救援工作任務和救援方案。

## 互助體系 Mutual Aid

成立於 1961 年“鄰居幫助鄰居”的概念延伸，執法互助系統用於在緊急情況下，恢復秩序，如內亂及不尋常的事件，也標準化的應急管理系統[SEMS]的一個組成部分，基於四個組織層次：市，縣，地區和國家。

## 消防和救援

加州消防和救援負責協調消防互助資源，協助各類突發事件的回應，2004/05 年度回應超過 115 個互助事故。消防和救援還包括危險材料科 (危險品) HAZMAT。有害物質 HAZMAT 對危險材料科 (危險品) 屬於消防和救援之任務，負責實施全州和當地政府的有害物質應急管理方案，計劃監督和團隊應變。

## 執法

加州執法及司法機構提供配備經驗豐富的官員，包括縣警長和警察部門，並可直接聯繫所有的聯邦機構，包括 FBI，ATF，特勤局，國家部門和所有國家的執法機構。

## 志願者 Vounteer

是災難服務工作者，任何人災難時或災後參與服務，沒有報酬或其他補償目的， DSW 負責註冊志願者及其志願的時間，以幫助災難或緊急服務機構開展工作。加州災害服務工作者志願者項目(DSWVP)，執行分配職責及提供志願者受傷賠償保險。

## 國家威脅評估系統 (STAS):

加州 OES 也可從信息與分析提供啟動國家運營中心 (SOC) 及安全評估，以獲取戰略分析及支持。信息和分析的組成也是國土安全及設施保安的一環，可使得聯邦和地方政府在從事安全工作有雙向信息與減輕分擔加州恐怖威脅的職責。

## 報告可疑活動

如果在應變狀況時有可疑的活動與可疑的人，如監視，獲取情報，測試，運行，部署資產/信息進入位置等，或懷疑有恐怖分子的資金或與恐怖主義連接行動的信息，請聯繫區域威脅評估中心。

CSTI 核心課程包括培訓第一應變者知覺級 First Responder Awareness 及操作級 First Responder Operations，HAZMAT 技術員，專家，安全官及事故指揮官，醫院醫療應變訓練 Hospital Medical Response Training，大規模殺傷性武器技術員/反恐專家 WMD Technician/Specialist Terrorism，工廠技術員和現場工作人員 Industry Technician and General Site Worker。也有專業課程包括，鐵路槽車安全，驗屍官，炸彈技術員和大量人員除污等等。加州 OES 副主任大衛·福富先生說:加州專門培訓學院在近年重組後已成為一個全加州企業支持，在各種領域擔負培訓，演習和教育的責任，包括:應變管理，公共安全，國土安全，危害物質 HAZMAT，災難復原和危機溝通等等。CSTI 不僅僅是在聖路易斯奧比斯波 (San Luis Obispo) 之校園裡，正在發展成為一個全面支持政府，非營利組織或私營組織的應變教育訓練需求。而隨著 CSTI 繼續前進，會看到進一步發展合作能量，增強個人，組織，機構和司法能力，也利用資金和資源，合作夥伴，相關技術，信息和專業技能從網上參與，訓練或設施，來支持大家的專業水準。我們的重點是以演練和教育最佳的解決方案建設各種能力，採用全隱患總資源的方法共同促進應變量能和持續提供的專業的培訓。

此次參與事故指揮官課程回訓，起因乃於 2014 年底前未及時填送相關文件因此需要本人親自回訓，但本人在臺灣仍持續負責環境事故應變諮詢中心有持續授課及參與應變諮詢服務 (2014 年具體績效如表 2)，故有前往之必要性。此行回訓及接洽過程順利，雖然回訓地點位於聖路易斯堡某軍營，因此禁止攝影紀錄，但於回國後收到 CSTI 信件通知 (附件三)，內容提及本人各項資格條件與需求都已達到認證標準，可繼續擔任認證講師，持續於臺灣開授訓練班，課程包括 First Responder Awareness, First Responder Operations, First Responder Operations Weapons of Mass Destruction, Incident Commander Incident Receiver Awareness and Decon (Hospital Decon) and First Responder Operations Receiver Operations and Decon (Hospital Decon)。往後每年可不用參與回訓，僅需填寫文件資料並回傳 CSTI 即可，可節省每年回訓之麻煩。

表 2 2014 年辦理緊急應變技術相關訓練及講座

日期	訓練及講座名稱	註
01 月 17 日	消訓中心特考班	
03 月 17 日	天然災害演講	
03 月 19 日	天然災害演講(校內演講)	
03 月 21 日	化災事故情境模擬兵棋推演實作	
07 月 04 日	化災整備及應變的新思維-Bhopal 30 年後-中科工安環保月活動	
07 月 16 日	偵五隊毒氣及毒性化學物質事故應變及案例討	
09 月 25 日	觀音工業區 化災講座	
09 月 27 日	朝陽科大實驗室應變講座	
10 月 17 日	斗六科技工業區毒災應變講座	
11 月 06 日	化災檢測(災害搶救高階指揮官班訓練)第一梯次	
11 月 07 日	化災檢測(災害搶救高階指揮官班訓練)第二梯次	
11 月 10 日	中科指揮官訓練第一梯次	
12 月 05 日	中科指揮官訓練第二梯次	
12 月 24 日	台中消防局-災害搶救高階指揮班訓練第一梯次	
12 月 28 日	台中消防局-災害搶救高階指揮班訓練第二梯次	

### 三、心得

本次前往美國 LA 及聖路易斯堡參加之感想心得如下：

1. CSTI 每年固定要求擁有其 HAZMAT 各種證照資格者如未有應變經驗需回訓或填寫本年度經驗，尤其是回訓主要為回報說明，運用 CSTI HAZMAT 事故 12 項應變原則的運用，檢驗每年是否有持續運用成效，以了解各人的執行經驗。
2. CSTI 對於擔任指導講師以及學習課程要達到每年熟悉及運用標準，以透過每年回訓來審核其身分資格，做為每年的能力認證，確保對於講師對 HAZMAT 應變原則的了解度及執行經驗。
3. 此次 CSTI 回訓地點為美國軍營內，有較多影像及文件管制與限制，故無法檢附照片。在本次參加回訓之同時也與 CSTI 協商，以後每年回訓的方式，可以使用文書報告等形式審查及認證本人在 CSTI HAZMAT 外部講師每年的身分資格，現也已爭取到 2015 年的訓練之講師資格，可開授課程 First Responder Awareness, First Responder Operations, First Responder Operations Weapons of Mass Destruction, Incident Commander Incident Receiver Awareness and Decon (Hospital Decon) & First Responder Operations Receiver Operations and Decon (Hospital Decon), First Responder Awareness, Responder Operations. Hospital Medical Response Training, WMD Technician/Specialist Terrorism, Industry Technician & General Site Worker。

### 四、建議事項

1. 如美國加州自 1970 年代及建立 CSTI HAZMAT 訓練，並推廣至民間可成為講師及開授課程，必需年年持續溫故知新技術及經驗，值得我國作為建立毒災或化災訓練制度之參考。
2. 本次接洽 CSTI HAZMAT 部門，如需要提升授課如危險化學品事故防制與應變等一些課程，均需再受訓並取得技術員 Technian 或專家 Specialist 資格，且擁有 3 年以上工作經歷及每年的資格認定 (附件四及五)，本人目前尚無法達成，可見加州在資格取得及管理之嚴謹，值得我國學習。



## 五、附錄

### 附件一、California Specialized Training Institute 介紹



CSTI 是美國加州緊急應變辦公室(O\_\_E\_\_S)的專屬訓練中心，提供之訓練多元，包括警察、消防、軍方、政府人員、民間等、領域包括犯罪、消防、醫療、化學及各種災害應變等。

- Vision

The leader in emergency management and homeland security through dedicated service to all.

We will realize our vision by building towards a safer more resilient California, leveraging effective partnerships, developing our workforce, enhancing our technology, and maintaining a culture of continuous improvement.

- Mission

We protect lives and property, build capabilities, and support our communities for a resilient California.

*We achieve our mission by serving the public through effective collaboration in preparing for, protecting against, responding to, recovering from, and mitigating the impacts of all hazards and threats.*



### Values Integrity:

We maintain trust by fulfilling our mission with honesty, accountability, and transparency.

#### Service:

We are dedicated to carrying out the duties and responsibilities entrusted to us and upholding a shared and principled commitment to our mission.

Respect: We recognize and value the diversity that exists within our organization, throughout our communities, and among our partners while demonstrating concern and compassion for all.

Resiliency: We promote safe and prepared communities with the strength to withstand or rebound from any event or emergency.

Goal 1: Anticipate and enhance prevention and detection capabilities to protect our state from all hazards and threats.

Goal 2: Strengthen California's ability to plan, prepare for, and provide resources to mitigate the impacts of disasters, emergencies, crimes, and terrorist events.

Goal 3: Effectively respond to and recover from both human-caused and natural disasters.

Goal 4: Enhance the administration and delivery of all state and federal funding, and maintain fiscal and program integrity.

Goal 5: Develop a united and innovative workforce that is trained, experienced, knowledgeable, and ready to adapt and respond.

Goal 6: Strengthen capabilities in public safety communication services and technology enhancements.

附件二、FORM188

Return this form to C.S.T.I. annually no later than **December 31** to stay "Certified". Thank you for your prompt attention.

Print Name:	JAO - JIA HORNG		
Current Work Address:	123 Univ. Road Sec. 3. Douliou, Taiwan		Phone: (886) 55342601 ext. 4418
Current Home Address:	17532 Antonio Ave, Cervatos, CA	Phone: (562) 229-1121	
Cell Phone:	(886) 911 115115	Email:	horngjj@gmail.com

List **Four One Hour entries** of CSTI Curriculum taught in this year in the lines below. Sign your name at the bottom of this box where indicated.

	Date 2014	Instructor Name (First/Last)	Class Type (FRA, FRO, Etc)	CSTI Block Title (S.I.N. Etc)
1.	10/17	JAO - JIA / HORNG	IC	C, D, E, F
2.	7/16	JAO - JIA / HORNG	IC	C, F, H
3.	7/4	JAO - JIA / HORNG	IC	C, H, P
4.				

I certify that I have taught the above listed four, 1 hour each C.S.T.I. Outreach Blocks:

\*Your Signature: *Jaojia Horng*

Verification can be made by **either** your Department Head or Agency Representative **or** by three students who attended your class. Complete the appropriate box below.

Department Head or Agency Representative Verification	
Name of Dept. Head or Agency Rep	Signature of Dept. Head or Agency Rep
Address of Dept Head or Agency Rep	Phone Number of Dept. Head or Agency Rep

Instructional Hours verified by the following 3 Students Who Attended Your Class:		
<i>Chia Chieh / Shen</i> Signature from Student # 1 in Class	<i>Chia Chieh / Shen</i> Printed Name Student # 1 in Class	<i>(886) 939445703</i> Contact Phone Number
<i>Yung Jang / Lin</i> Signature from Student # 2 in Class	<i>Yung Jang / Lin</i> Printed Name Student # 2 in Class	<i>(886) 91352200</i> Contact Phone Number
<i>Ke Hung / Liu</i> Signature from Student # 3 in Class	<i>KE - Hung / Liu</i> Printed Name Student # 3 in Class	<i>(886) 953955613</i> Contact Phone Number

FAX: 805/549-3555 Mail: Camp SLO, CSTI/CAL OES, Bldg. 904, 10 Sonoma Ave., San Luis Obispo, CA 93405-7605.

I request CSTI to contact me specifically by e-mail when issuing public notices of proposed regulatory changes. Initials

附件三、CSTI 函知本人 2015 講師資格確認及可開班課程

STATE OF CALIFORNIA

JERRY BROWN, GOVERNOR

www.csti.ca.gov  
**CSTI**  
California  
Specialized  
Training  
Institute

**California Specialized Training Institute**  
Training Branch of the Governor's Office of Emergency Services  
Camp San Luis Obispo  
ATTN: CSTI/Cal OES, Bldg. 904  
10 Sonoma Ave.  
San Luis Obispo, CA 93405-7605  
Phone: (805) 549-3534  
Fax: (805) 549-3555



02/06/2015

Jao-Jia Horng  
Yulin Univ. Dept. Saf. Hlth. & Env. Eng.  
123 University Road Sec. 3  
Douliou, Taiwan ROC 6-40

To whom it may concern, Jao-Jin Horng has been a California Specialized Training Institute Hazardous Materials Outreach Instructor since June 6, 2002. He has maintained his certification and is certified by our agency to teach the following Hazardous Materials courses:  
First Responder Awareness, First Responder Operations, First Responder Operations Weapons of Mass Destruction, Incident Commander, Incident Commander Weapons of Mass Destruction, First Responder Operations Receiver Awareness and Decon (Hospital Decon) and First Responder Operations Receiver Operations and Decon (Hospital Decon).

If you have any questions, please contact me at the numbers listed above.

Sincerely,  
California Specialized Training Institute

SUSAN SPEER KOCHER  
Outreach Program Coordinator  
Hazardous Materials Section

## 附件四、講師資格

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### Regulations Requirements to Instruct

**(g)** To become a California State Certified Hazardous Materials / Weapons of Mass Destruction Emergency Response, **First Receiver Operations and Decontamination for Health Care Instructor**, the applicant shall complete the following requirements:

- (1) All of the requirements specified in Section 2530 (a); and
- (2) Complete the Hazardous Materials / Weapons of Mass Destruction Emergency Response, First Receiver Operations and Decontamination for Health Care course, as specified in Section 2520 (w); and be certified as a Hazardous Materials Technician or have three years experience in a Health and Safety position in a Healthcare environment, or equivalent, or be currently licensed as a Registered Nurse, Physician Assistant, or Medical Doctor certified to the First Responder Operations/Decontamination level as specified in Section 2520 (b) and 2520 (x).

**(m)** To become a California State Certified Hazardous Materials Weapons of Mass Destruction **Assistant Safety Officer Instructor**, the applicant shall complete all of the following requirements:

- (1) Complete all the requirements of Title 19 CCR 2530 (a)(1) and (2); and,
- (2) Complete the certified course, as referenced in Section 2520 (r); and,
- (3) Hold certification to the Hazardous Materials Specialist level (as defined by Title 19 CCR 2540 (o) and as a Certified CSTI Outreach Instructor in Hazardous Materials Specialist as defined in Section 2530 (b); and,
- (4) Provide a resume and supporting documentation, including written verification from applicant's department head or designee, describing a minimum of 80 hours of teaching experience and a minimum of 3 years work experience on a hazardous materials response team.

**(o)** To become a California State Certified Hazardous Materials Weapons of Mass Destruction **Terrorism for the Technician/ Specialist Course**, the applicant shall complete all of the following requirements:

- (1) Complete all the requirements of 19 CCR 2530 (a)(1) and (2); and,
- (2) Successful completion of the certified course, as referenced in Section 2520 (ff); and,
- (3) Hold certification to the Hazardous Materials Technician or Specialist level (as defined by Title 19 CCR 2540 (o) and as a Certified CSTI Outreach Instructor in Hazardous Materials Technician or Specialist as defined in Section 2530 (b); and,
- (4) Submission of a resume and supporting documentation, including written verification from applicant's department head or designee, describing a minimum of 80 hours of teaching experience and a minimum of 3 years work experience on a hazardous materials response team.

**[Technician/Specialist Certification Requirements]**

(b) To become a California State Certified Hazardous Materials Technician/Specialist 1B, 1C, 1D, 1F, 1G, Hazardous Waste General Site Worker or Hazardous Materials Emergency Response Technician -Private Industry Instructor, the applicant shall complete all of the following requirements:

- (1) Submission of CSTI Application Form, as referenced in Section 2550(a)(11), to the Office of Emergency Services, California Specialized Training Institute; and
- (2) Agreement to adhere to the policies, procedures and administrative requirements for delivering, documenting, and certifying the California Hazardous Substances Incident Response Training and Education Program as contained in Title 2 of the California Government Code, Division 1, Chapter 7, Sections 8574.19-8574.21 and Title 19 of the California Code of Regulations, Chapter 1, Subchapter 2, Sections 2510-2560; and
- (3) Successful completion of the certified course(s), as referenced in Section 2520(k)-(q), (s) and (t) in which the applicant is seeking instructor certification; and
- (4) Submission of a resume and supporting documentation, including written verification from applicant's department head or designee, describing a minimum of 80 hours of teaching experience and a minimum of 3 years work experience in hazardous materials response, training, production, research, investigations or monitoring, or a combination of any six, relating to the subject area in which the applicant is seeking instructor certification, as referenced in Section 2520(k)-(q), (s) and (t). (To become certified to instruct the Hazardous Waste General Site Worker Course, an applicant's 3 years of work experience must be in the field of hazardous waste operations.); and
- (5) Successful completion of either one of the following:
  - (A) Hazardous Materials Instructor Certification Course as referenced in Section 2520(h); or
  - (B) Hazardous Materials Instructor Certification For Trainers Course as referenced in Section 2520(i); and,

**[Technician/Specialist 1A Certification Requirements]**

(c) To become a California State Certified Hazardous Materials Technician/Specialist 1A Instructor, the applicant shall complete all of the following requirements:

- (1) All of the requirements specified in Section 2530(b); and
- (2) Submission of a photocopy, employer verification or valid supporting documentation for the following:
  - (A) Bachelor of Science, or Masters of Science or doctoral degree in a physical or life science that included at least two upper division semester (or equivalent quarters) courses in chemistry; or
  - (B) Two upper division semester (or equivalent quarters) courses in college chemistry with a passing grade of "C" or better; and,
  - (C) Submission of a resume and supporting documentation, including written verification from applicant's department head or designee, describing a minimum of 80 hours of teaching experience and a minimum of three years of work experience in chemistry training, chemical production or chemical research, or a combination thereof.