

ASEPO	Alliance of Special Effects and Pyrotechnic Operators
AORC	Automotive Occupant Restraint Council
BC	Boeing Company
CAPA	California Attractions and Parks Association
CalTrans	California Department of Transportation
CHP	California Highway Patrol
CAAA	California State Automobile Association
CSSA	California State Sheriffs' Association
DOD	Department of Defense
FBPD	Fort Bragg Police Department
FFD	Fresno Fire Department
HASA	HASA Inc.
HB	Hanson Bridgett (MP Associates, Pyro Spectaculars)
IWMB	Integrated Waste Management Board
PC	Paul R. Curry and Associates
PSG	Perchlorate Study Group
SCS	Shasta County Office of the Sheriff
SDI	Special Devices, Incorporated
SDMA	Sedgwick Detert, Moran & Arnold (Orion Safety Products)
TFI	The Fertilizer Institute
WPHA	Western Plant Health Association
WBR1	Weston Benshoof Rochefort Ruvalcava & MacCuish 8/31/05
WBR2	Weston Benshoof Rochefort Ruvalcava & MacCuish 10/7/05

ASEPO Alliance of Special Effects and Pyrotechnic Operators
CPEO Center for Public Environmental Oversight
DOD Department of Defense - Navy
NRDC Natural Resources Defense Council
PSR Physicians for Social Responsibility – Los Angeles
SFL Sierra Foothills Laboratory
SDI Special Devices, Incorporated
WBR1 Weston Benshoof Rochefort Ruvalcava & MacCuish 8/31/05

AORC Automotive Occupant Restraint Council



Automotive Occupant Restraints Council

Administrative Office
1081 Dove Run Road, Suite 403
Lexington, Kentucky 40502
(859) 269-4240
FAX: (859) 269-4241
E-mail: info@aorc.org

October 6, 2005

Ed Nieto
Department of Toxic Substances Control
P.O Box 806
Sacramento, California 95812-0806

RE: Perchlorate Best Management Practices

Dear Mr. Nieto,

The Automotive Occupant Restraints Council (AORC) appreciates the opportunity to comment on the proposed Best Management Practices for perchlorate containing materials.

The AORC, founded in 1961, is an industry association of 52 suppliers of occupant restraints, components, materials and services to the automobile industry. The mission of the Council is to reduce highway casualties and injuries by providing the motoring public with reliable and effective occupant restraint systems, components and services, and to promote public acceptance and proper use of their restraint systems. The Council speaks for the industry, representing its interests and presenting its views on any and all national and international levels.

AORC recently became aware of DTSC's efforts to promulgate regulations to implement AB 826. A member of AORC, SDI, previously submitted correspondence to DTSC on August 31, 2005. AORC agrees and supports the comments submitted by SDI.

Air bag initiators and inflators (ABI&I) often contain perchlorates. However, they are manufactured in a way that prevents the finished product from exposure to the environment. ABI&I are sealed from the environment prior to deployment and during an accident in which they are deployed, the perchlorate is destroyed through the combustion process. Additionally, because pyrotechnic materials contain ABI&I, they are regulated extensively by ATF and DOT during storage and transportation. Therefore, we request that DTSC consider an exemption from the perchlorate BMP for ABI&I.

Sealed from the Environment

ABI&I are manufactured under strict quality standards. All parts passing quality testing and sold to customers are hermetically sealed from the environment. Parts that are not hermetically sealed will not pass the quality tests and will not be sold. This assures that the perchlorate in ABI&I does not come in contact with the environment.

Perchlorates Destroyed During Deployment

Testing shows that perchlorate containing compounds are consumed in ABI&I deployment processes. Therefore, perchlorate levels in expelled ABI&I byproducts are inconsequential. Chemical analyses show that perchlorates primarily reduce to inert chlorides in ABI&I deployments.

Perchlorates are Regulated by Alcohol Tobacco and Firearms and the Department of Transportation

The perchlorate containing materials in ABI&I are pyrotechnics. As such they fall under the regulatory coverage of ATF and DOT. ATF ensures the correct storage and handling of these perchlorate containing materials while DOT ensures safe practices during transportation.

Summary

Due to the fact that: 1) ABI&I are sealed in a way that prevents exposure to the environment, 2) during deployment the perchlorates are destroyed, and 3) ATF already regulates and controls the pyrotechnic materials used in ABI&I, we request that ABI&I be exempted from the BMP.

Sincerely,



George F. Kirchoff
President
Automotive Occupant Restraints Council

GFK/jm

ASEPO Alliance of Special Effects and Pyrotechnic Operators

Via Facsimile From:



THE ALLIANCE OF SPECIAL EFFECTS
AND PYROTECHNIC OPERATORS

Friday, October 7, 2005

California Environmental Protection Agency
Department of Toxic Substances Control
Hazardous Waste Management Program
1001 I Street, P.O. Box 806 Sacramento, CA 95812
via facsimile (916) 322-1005 FAX

Regarding: Comments on Perchlorate BMP Draft Language of
September 16, 2005

Ladies and Gentlemen,

We are a non-profit, mutual-benefit, volunteer-run organization of special effects professionals who work in motion pictures, television and on stage. We are writing to you with our comments regarding the best management practices for perchlorates, as mandated by AB 826 the Perchlorate Contamination Prevention Act and as discussed at the DTSC Perchlorate BMP Workshop on September 23rd, 2005 with respect to the use and management of perchlorate-containing special effects materials intended for the purpose of producing a visible or audible effect as a necessary part of motion picture, television, theatrical or operatic production. These comments are in addition to our previous comments.

Let us begin by thanking DTSC once again for this opportunity to give input. Our organization's comments are as follows:

Regarding § 67384.2 Applicability

We support exempting combustion residuals of pyrotechnic perchlorate materials as these are unlikely to significantly contribute to environmental perchlorate contamination.

Regarding § 67384.4 Labeling requirements for Perchlorate Materials

The requirements should not apply to perchlorate materials which are accompanied with a Material Safety Data Sheet that includes the reference to perchlorate Best Management Practices or for which such a sheet is available when used by trained persons. The requirement that the sheet accompany the item is impractical and burdensome, especially with respect to single use items made on site.

Further, we recommend that a manufacturer should be required to disclose upon request whether a particular product contains perchlorate materials and if so, what amount. This is to prevent a vague, general compliance strategy consisting of simply putting "this product may contain perchlorate" labels on all products, which is useless to the end user who has to implement best management practices.

§ 67384.6 Containment requirements for perchlorate materials

Consumer goods stored or used, including consumer fireworks, flares, pyrotechnics, model rockets, ammunition, blasting agents, etc. should be exempt as well as any items containing similar amounts of perchlorates whether for consumer or professional use.

We feel it is important to keep focused on the law's intent of protecting the environment. As such, materials should be regulated on the basis of their relative risk of causing environmental contamination, not whether their intended end use is in a professional setting or by consumers. Arguably, a professional setting such as a workplace is a lower risk due to having trained persons, best management practices and procedures, etc.

Regarding § 67384.7 Notification requirements for perchlorate materials and § 67384.8 Reporting requirements for perchlorate materials

Both of these requirements are burdensome for both industry and government. For motion picture, television and stage

productions which are temporary business entities, such reporting would generate large amounts of relatively meaningless paperwork for the tiny quantities used. We suggest such reporting be carried out by the manufacturers or importers and refer to our previous comments.

§ 67384.9 Special Management for perchlorate materials

We support that household hazardous waste collection centers accept consumer fireworks waste as this is consistent with the management of perchlorate environmental risk, given the likely large quantity of such waste and recommend that this avenue be actively pursued.

Regarding consumer versus display/ professional fireworks.

As said previously, we feel it is important to keep focused on the law's intent of protecting the environment, especially in this respect. Materials should be regulated on the basis of their relative risk of causing environmental contamination, not whether their intended end use is in a professional setting or by consumers. Arguably, a professional setting such as a workplace is a lower risk due to having trained persons, best management practices and procedures, etc.

It is important to realize that the composition amounts reference with respect to consumer fireworks are based on minimizing risk during transportation and use by consumers, NOT perchlorate content. They are also relatively complex, which would make compliance and enforcement difficult.

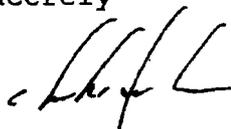
We suggest that a simple limit for either consumer or professional use, without distinction, based on the consumer fireworks item with the largest potential content of perchlorate materials be used instead, namely a maximum total weight of 500 g of pyrotechnic composition. This is derived from APA STANDARD 87-1 STANDARD FOR CONSTRUCTION AND APPROVAL FOR TRANSPORTATION OF FIREWORKS, NOVELTIES, AND THEATRICAL PYROTECHNICS, which has been adopted by reference in 49 CFR 171.7 (3) and correlates with the CPSC regulations in 16 CFR, Parts 1507.

Regarding the way forward:

On behalf of our organization, we again thank DTSC for this opportunity to comment on this issue. As one might expect, this letter does not represent the entirety of our comments and views on the issue of perchlorate and its best management practices, merely those which the constraints of time and our limited resources allowed us to put in writing at this time.

We would like to continue to work with CAL EPA and encourage DTSC to contact us should they desire any further clarification or discussion of our position on these issues and other aspects of the regulation of perchlorates.

Sincerely



Chuck Hughes
Vice President
Chucklink@earthlink.net

BC Boeing Company

A31-L480-HTS-L-05-073

7 October 2005

SUBJECT: Comments on September 16th Perchlorate BMP Draft Language

TO: Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812

ATTN: Eduardo Nieto

The Boeing Company (Boeing) is pleased to provide the following comments regarding the September 16th draft of the perchlorate BMP regulation. Boeing operates two space launch facilities on Vandenberg Air Force Base, California where it launches the Delta II and Delta IV rockets from Space Launch Complex 2 and Space Launch Complex 6 respectively. Both of these launch vehicles use Graphite Epoxy Motors (GEM) to help boost them into orbit. The GEM-40 is used on the Delta II and the GEM-60 is used on the Delta IV. The GEM-40 and GEM-60 are identical in composition, but differ in size. These solid rocket motors (SRM) are manufactured by Alliant Tech Systems, based in Utah. Boeing plans to attend the November 1st hearing and provide some of these comments directly. Boeing would be pleased to discuss these prior to the November 1st meeting.

Section 67384.2 Applicability: Add the following exemption:

6. Solid Rocket Motors used to boost launch vehicles into space.

Justification: Solid rocket motors are articles and when used in accordance with manufacturer's specifications and for their intended purpose, do not pose a hazard to the environment or groundwater.

The ammonium perchlorate that comprises the bulk of the motor is trapped in an enclosed hydroxyl-terminated polybutadiene (HTPB) binder. See Attachment 1, MSDS for GEM-60 SRM. The propellant/binder combination is enclosed in a graphite epoxy composite case. This case is impervious to water. The propellant is a Class 1.3 C explosive. These rockets are shipped and stored in accordance with DOT, NFPA and BATF explosive safety requirements. This further precludes any contact with water or groundwater, as the rockets are shipped and stored in enclosed trailers or hangars. The only way that these motors can contaminate the environment is if the external cases are intentionally split open and the interior component is cut up and left on the ground. This is not in

accordance with manufacturers specifications and is potentially fatal to the perpetrator.

Perchlorates do not survive the combustion of the solid rocket motor. The perchlorates are completely consumed by the explosive combustion process. Combustion products include carbon dioxide, aluminum oxides, hydrogen chloride, other chlorine-containing compounds, and nitrogen oxides. Methane, aldehydes, carboxylic acid, and hydrogen cyanide may be formed under some conditions, (see GEM-60 MSDS). There have also been extensive studies on the exhaust plumes from solid rocket motors, and perchlorates have never been detected in the exhaust products. Three studies are available and will be supplied by the U.S. Air Force as part of their comments. They are:

1. Pegasus Launch Vehicle Environmental Assessment.
2. Kodiak Launch Complex Environmental Monitoring.
3. Combustion of Solid Propellant.

Boeing has conducted sampling of the post-launch wash-water from a Delta IV launch vehicle which employed solid rocket motors at Cape Canaveral Air Force Station (CCAFS), Florida. A copy of the sampling results is included as Attachment II. Perchlorates were not detected using EPA Method 314.0. Additional sampling of launch pad deluge water was conducted at CCAFS to determine if deluge water could be released to the sewer. The results of all samples analyzed for perchlorate were non-detect.

Based on these documents, and many other technical and environmental documents that indicate perchlorate is not emitted from the ignition and firing of SRMs, Boeing requests that Solid Rocket Motors be exempted from the BMP regulation. Solid Rocket Motors as articles do not emit perchlorates to the environment and the byproducts of combustion do not contribute perchlorates to the environment.

Boeing requests an exemption from the entire Chapter 33 of the proposed BMP as described above. If DTSC cannot support this, Boeing requests exemptions from, or clarification of, the following sections of the regulation:

§ 67384.4 Labeling requirements for Perchlorate Materials:

The solid rocket motors are labeled in accordance with DOT, NFPA and BATF explosive safety regulations. It is clear from these markings the motors are extremely hazardous and must be handled with great care. There are many regulations that govern the transportation and storage of explosives. Additional

labeling is not necessary. Furthermore, companies that do not operate in California are not subject to California regulations. This places an undue burden on the customer to ensure that the motors are labeled when they reach state lines. Boeing believes this requirement to be unreasonable and unnecessary for solid rocket motors.

§ 67384.5 Packaging requirement for perchlorate materials

The construction of the solid rocket motors meet this requirement, as described in the paragraphs above. Boeing requests DTSC concur that solid rocket motors as described meet the requirements of this section.

§ 67384.6 Containment requirements for perchlorate materials

Boeing requests concurrence that the motors are packaged in accordance with section 67384.5, and that additional containment is not necessary.

§ 67384.7 Notification requirements for perchlorate materials

Boeing does not manufacture or process solid rocket motors. They are combusted as part of the launch sequence. Should this activity be considered "...used by your business?" Boeing suggests another category, "Consumed during explosive combustion." There are no residual perchlorates from this complete combustion process.

§ 67384.8 Reporting requirements for perchlorate materials

See comment for section 67384.7. Boeing suggests that another category be added to this form.

§ 67384.9 Special Management for perchlorate materials

Boeing would like to reiterate there are no residual perchlorates as a result of solid rocket motor combustion, and that no extraordinary measures are required to contain or sample post-launch water or wash-down products except to control the pH of the water resulting from HCL deposition.

§ 67384.10 Discharge/Disposal Restrictions for perchlorate materials

See comment above, section 67384.9

Alternatives

§ 67384.xx Perchlorate Restrictions (b)

See comment above. Sampling around launch sites should not be required for nominal launches. Sampling of post-launch wash down water and of local bodies of water is required by contracts between Boeing and the U.S. Government. These samples are analyzed for perchlorates and other chemicals to ensure there is no contamination or carryover from the combustion of solid rocket motors.

Additional comment-

Boeing understands that the rationale behind section 67384.2 (b) 3. applicability, is that six (6) parts per billion (ppb) is the California Action Level for perchlorates. Per EPA test method 314.0, the lowest detection limit for perchlorates is 1 ppb. Also, 6 ppb of perchlorate in a consumable or article does not automatically translate into 6 ppb in groundwater or soil. Tests conducted so close to the detection limit are always suspect. Boeing suggests that the definition in (b) 3 be changed to sixty (60) parts per billion of perchlorate, a ten-fold increase. This is more realistic with regards to cause and effect for environmental contamination, and addresses the inconsistencies that are sure to arise during laboratory sampling and analysis.

This concludes Boeing's comments on the September 16th Perchlorate BMP Draft Language. Boeing will attend the November 1st meeting and present comments as necessary.

Should you have any questions, please do not hesitate to contact Ms. Rhonda Cardinal at (805) 606-6340 x6566.

Sincerely,

Original signed by:

Harley T. Santos, Jr.
Manager
Safety, Health, and Environmental Affairs
Delta II/IV Launch Operations
Vandenberg AFB, CA

HTS/rec/imk

Attachment 1

GEM-60 Material Safety Data Sheet



ALLIANT TECHSYSTEMS GEM 60
ROCKET MOTOR

ISSUE DATE: 25 August 2000

Alliant Aerospace Company
Gem 60 Rocket Motor Assembly
P.O. Box 98
Magna, UT 84044-0098

24 Hour Emergency No. 1-801-250-5911
Information Phone: 1-801-251-4702

Issue Date 25 August 2000

Emergency No. (Chemtrec) 1-800-424-9300

SECTION 1: PRODUCT IDENTIFICATION

DANGER! SOLID PROPELLANT ROCKET MOTOR, CLASS 1.3C EXPLOSIVE. ROCKET MOTOR ORDNANCE ITEMS, HOUSED MAINLY UNDER THE RACEWAY COVERS WHEN EXPOSED TO HEAT SUCH AS FIRE, COULD REACT UNEXPECTEDLY AND MAY START THE MOTOR TO BURN. ACCIDENTAL FIRE OR EXPLOSION IS LIKELY TO CAUSE SEVERE INJURY OR DEATH. FORWARD PORT COVER CONTAINS THRU-BULKHEAD INITIATORS. HANDLE ONLY WITH APPROVED HANDLING PROCEDURES. DO NOT HANDLE MOTOR BY NOZZLE ASSEMBLY. MAY CAUSE SKIN AND EYE IRRITATION.

PRODUCT NAME: ALLIANT TECHSYSTEMS GEM 60 ROCKET MOTOR

PRODUCT NUMBER: 330000-009 and 330000-019

CASRN: Mixture

APPEARANCE AND ODOR: White painted graphite epoxy composite case, enclosed hydroxyl-terminated polybutadiene (HTPB) binder - ammonium perchlorate/aluminum solids propellant. Approximate length 515 inches, approximate diameter 60 inches. No odor.

CHEMICAL AND COMMON NAME: Ballistic Solid Rocket Motor

UN PROPER SHIPPING NAME AND CLASSIFICATION: Rocket Motors, 1.3C, UN0186.

SECTION 2: HAZARDOUS COMPONENT INFORMATION

HAZARDOUS INGREDIENTS	Wt %	CASRN	RECOMMENDED AIRBORNE LEVELS
Aluminum Powder (pyro) (1)	30 max	7429-90-5	5 mg/m ³ (TLV-TWA) (1)
Ammonium Perchlorate (2)	80 max	7790-98-9	Not established
1,1'-(1,3-phenylene di-carbonyl)bis(2-methyl-aziridine) (3)	<1 max	7652-64-4	Not established

- (1) Although the use of this product is not expected to result in a workplace dust, the existence of a TLV for the aluminum powder requires it to be identified as a hazardous material.
- (2) Ammonium Perchlorate has no established exposure limits. However, ACGIH lists TLV for nuisance dust at 10 mg/m³ and 5 mg/m³ for respirable dusts.
- (3) The level of aziridine in this product is below the OSHA required level for reporting. However, because of its mutagenic and possible carcinogenic potentials, it has been listed.

MSDS: GEM 60 Rocket Motor ISSUE DATE: 25 August 2000 PAGE 2 OF 7

VENDOR 009263
MSDS# 128145
nw

SECTION 3: HAZARDS IDENTIFICATION

Refer to Section 5 for Hazardous Combustion Products and for Hazardous Decomposition/Hazardous Polymerization Products.

SECTION 4: FIRST AID PROCEDURES

FIRST AID PROCEDURES:

EYES: Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get medical attention.

SKIN: Wash thoroughly with soap and water. Remove contaminated clothing. Get medical attention if irritation develops. Wash lightly contaminated clothing with alkaline detergent before reuse. Discard highly contaminated clothing. Render unusable and discard contaminated shoes and leather articles.

INHALATION: Remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

INGESTION: If conscious, drink large quantities of water. Induce vomiting. Get immediate medical attention. NEVER give anything by mouth to an unconscious person. NEVER induce vomiting in an unconscious person.

SECTION 5: FIRE, EXPLOSION, & REACTIVITY DATA

DANGER! SOLID PROPELLANT ROCKET MOTOR, CLASS 1.3C EXPLOSIVE. ROCKET MOTOR ORDNANCE ITEMS, HOUSED MAINLY UNDER THE RACEWAY COVERS WHEN EXPOSED TO HEAT SUCH AS FIRE, COULD REACT UNEXPECTEDLY AND MAY START THE MOTOR TO BURN. ACCIDENTAL FIRE OR EXPLOSION IS LIKELY TO CAUSE SEVERE INJURY OR DEATH. FORWARD PORT COVER CONTAINS THRU-BULKHEAD INITIATORS. HANDLE ONLY WITH APPROVED HANDLING PROCEDURES. DO NOT HANDLE MOTOR BY NOZZLE ASSEMBLY. MAY CAUSE SKIN AND EYE IRRITATION.

AUTOIGNITION TEMPERATURE: 200°C (392°F) - Note: Through Bulkhead initiator ignites at lower temperature than propellant.

FIRE FIGHTING PROCEDURES: Evacuate Area Immediately, Do Not Fight Fire.

EXTINGUISHING MEDIA: None. This material provides its own oxygen and will burn under any environmental conditions when ignited.

HAZARDOUS COMBUSTION PRODUCTS: Combustion products vary depending on fire conditions and other combustibles present in the fire. The predominant products will be carbon dioxide, aluminum oxides, hydrogen chloride, irritating chlorine-containing compounds, and nitrogen oxides. Under some conditions, methane, irritating aldehydes and carboxylic acids and hydrogen cyanide may be formed.

GENERAL STABILITY CONSIDERATIONS: Unstable at temperatures above 75°C (167°F)
This material is sensitive to friction, shock, impact, heat, and electrostatic discharge.

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SECTION 5: FIRE, EXPLOSION, & REACTIVITY DATA (Cont.)

INCOMPATIBLE MATERIALS: Incompatible with acids, alkalis, oxidizing agents, transition metal compounds or

oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: None anticipated under normal or recommended handling and storage conditions. Does not decompose prior to autoignition.

HAZARDOUS POLYMERIZATION: Not anticipated under normal or recommended handling and storage conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Not applicable - See Section 12: Waste Disposal

In case of accidental spill or release, refer to Section 8, Personal Protective Equipment and General Hygiene Practices.

SECTION 7: HANDLING AND STORAGE

GENERAL MEASURES:

Avoid friction, impact, heat, or electrostatic discharge.

Do not drop or impart mechanical shock.

Follow appropriate D.O.D., N.F.P.A., and B.A.T.F. explosive safety requirements. Local ordinances may apply.

Store in a cool, dry place, between -1° and 38°C (30° and 100°F). Use appropriate grounding techniques.

MATERIALS OR CONDITIONS TO AVOID: This product may react with acids, alkalies, oxidizing agents or transition metal compounds and should not be stored near such materials. Do not expose to heat, flames, sparks and other ignition sources.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

NOTE: The following exposure controls and personal protective measures are recommended relative to potential exposures during assembly, disassembly, inspection, repair, maintenance, etc.

GENERAL HYGIENIC PRACTICES:

Avoid breathing dust, vapor, or mist.

Avoid contact with eyes, skin, and clothing.

Wash thoroughly after handling, and before eating, drinking or smoking.

Remove contaminated clothing promptly and clean thoroughly before reuse.

PERSONAL PROTECTIVE EQUIPMENT:

Wear appropriate foot protection.

Static-free clothing.

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SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION (Cont.)

PERSONAL PROTECTIVE EQUIPMENT (Cont.):

Appropriate protective clothing for flash and for fire hazard.

Wear appropriate eye protection.
Wear impervious gloves.
Appropriate respiratory protection is required when exposure to airborne contaminants may exceed acceptable limits.
Respirators should be selected and used in accordance with OSHA, Subpart I (29CFR part 1910.134) and manufacturer's recommendations.

WORK PRACTICES AND ENGINEERING CONTROLS

Material is shock sensitive. Use care in handling.
Prevent build-up of static electric charge.
Keep away from ignition sources.
Use process enclosures, local exhaust ventilation, or engineering controls to control airborne levels below recommended exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations.
Eyewash fountains and safety showers should be easily accessible.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE:

Eliminate ignition sources and prevent build-up of static electric charges.
Completely isolate and thoroughly clean all equipment, piping, or vessels before beginning maintenance or repairs.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A
Solubility in Water: Binder is waterproof but major component is ammonium perchlorate which is very soluble in water
Vapor Pressure @ 20 degrees: Negligible
Vapor Density: N/A
Melting Point: N/A
Specific Gravity: Heavier than Water
Evaporation Rate: N/A
pH: N/A

SECTION 10: TOXICOLOGICAL INFORMATION

THE COMPONENTS LISTED BELOW ARE PRESENT IN A SOLID CURED MATRIX, AND CITED HAZARDS MAY NOT BE RELEVANT IN THIS FORM.

REPORTED HUMAN EFFECTS: Alliant Techsystems Inc. has not received any reports of adverse effects from workers handling this product.

COMPONENT - Aluminum powder (Pyro): Continued exposure to concentrations above the recommended TLV may cause irritation of the eyes, mucous membranes and upper

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SECTION 10: TOXICOLOGICAL INFORMATION (Cont.)

respiratory tract. At high concentrations and after many years of inhalation exposure, some aluminum powders have been reported to cause diffuse tissue formation in lungs (Shaver's disease). This is believed to be due to impurities in the aluminum. Fatalities with pulmonary fibrosis were once reported in England following protracted overexposure to aluminum dust. However, similar fatalities have not occurred anywhere else in the world. The English cases are believed to be due to impurities in the aluminum.

COMPONENT - Ammonium Perchlorate: Ingestion of large amounts has been reported to cause irritation of throat, stomach, and intestines; aplastic anemia and methemoglobinemia. Severe overexposure by ingestion may aggravate reduced thyroid activity.

REPORTED ANIMAL EFFECTS: No animal toxicity studies have been carried out with this product.

COMPONENT - Aluminum Powder (Pyro): Rats exposed for 1/4 lifetime to atmospheres containing 100 mg/m³ of aluminum dust (20 times the TLV) followed by 1/2 their lifetime to 30 mg/m³ did not develop any lung fibrosis.

COMPONENT - Ammonium Perchlorate: The rat and rabbit oral LD50's were 4,200 and 1,900 mg/kg, respectively. This component was evaluated as a feed supplement for fattening chickens, swine, cattle, and sheep. No adverse effects were reported.

COMPONENT - Aziridine: This material caused mild irritation to rabbit eyes on direct contact with minimal irritation persisting through day seven. It was also slightly irritating to rabbit skin on direct contact. Orally, it is practically non-toxic with an acute oral rat LD50 greater than 5,000 mg/kg.

OTHER: Aziridine was positive for mutagenicity in a number of assays. Its long term exposure effects are unknown; but, it may be a potential cancer hazard. It is expected that levels of aziridine in this product are below OSHA's reporting requirements. Nevertheless, Alliant Techsystems feels obligated to warn of its potential mutagenic effects.

CARCINOGENICITY INFORMATION: The components of this product are not listed as carcinogens by NTP; not regulated as carcinogens by OSHA; and not listed by IARC.

MUTAGENICITY/GENOTOXICITY INFORMATION: No mutagenicity studies have been carried out with this product. Aziridine was positive for mutagenicity in a number of assays.

SECTION 11: ECOLOGICAL INFORMATION

ECOTOXICITY: No ecological studies have been carried out with this propellant.

SECTION 12: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

The disposal or destruction of excess, damaged, or deteriorated explosives should be carried out under the direct supervision of a qualified person. Call Alliant Techsystems Incorporated for assistance if needed.

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SECTION 12: DISPOSAL CONSIDERATIONS (Cont.)

This material exhibits the characteristics of reactivity (D003) as defined in hazardous waste regulations 40 CFR 261 Subpart C. Therefore, disposal of unused material must comply with hazardous waste regulations.

SECTION 13: TRANSPORTATION INFORMATION

DOT Class:	1.3C
DOT Label:	Explosive 1.3C
DOT Proper Shipping Name:	Rocket Motors

UN Serial Number:
N.E.W.:

0186
65,500 lbs

SECTION 14: REGULATORY INFORMATION

CHEMICAL INVENTORIES:

U.S. TSCA Status: This product is considered to be an article by TSCA definition.

EPCRA

Sections 302 and 304:

This product is not an Extremely Hazardous Substance subject to reporting under 40 CFR 355. It is not regulated under 40 CFR 302.4 - List of Hazardous Substances and Reportable Quantities.

Sections 311 and 312 - 40 CFR 370 Hazardous Chemical Reporting Requirements "Hazard Categories":

HC-1: Acute health hazard
HC-3: Fire hazard
HC-4: Sudden release of pressure hazard
HC-5: Reactive hazard

Section 313: None

CERCLA

It is not regulated under 40 CFR 302.4 - List of Hazardous Substances and Reportable Quantities.

RCRA

Product exhibits the following characteristics listed in 40 CFR 261, Subpart C: reactivity (D003).

SECTION 15: OTHER INFORMATION

LIST OF ACRONYMS:

ACGIH: American Conference of Governmental Industrial Hygienists
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SECTION 15: OTHER INFORMATION (Cont.)

ANSI: American National Standards Institute
C: Ceiling
CASRN: Chemical Abstract Service Registry Number
CERCLA: Comprehensive Emergency Response, Compensation and Liability Act
HMIS: Hazardous Material Identification System
IARC: International Agency for Research on Cancer
N/A: Not Applicable
NOR: Not Otherwise Regulated
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: OSHA Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act

RQ: Reportable Quantity
SARA: Superfund Amendment Reauthorization Act
STEL: Short-Term Exposure Limit
TLV: Threshold Limit Values (registered trademark of ACGIH)
TPQ: Threshold Planning Quantity
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal, state or local law.

Attachment 2

Florida Deluge Water Sampling Results

Note: A value followed by a "U" means that the substance was undetected at the detection limit. This is a Florida convention.

From: Mixon, Amy [AMixon@ene.com]
Sent: Thursday, October 06, 2005 1:55 PM
To: Cardinal, Rhonda E
Subject: Perchlorate sample results

Rhonda,

Per our discussion, please find attached the pages from three analytical reports that show the perchlorate sample results for three samples collected during our deluge wastewater study at Cape Canaveral in 2002/2003. Each of these samples was collected from the deluge wastewater collected during a launch of rockets fueled by solids. In addition to these three samples, Frank Beckage should have the lab report for the sample he collected during our study period from his deluge wastewater. I don't see that actual report in my files.

Please feel free to give me a call if you have additional questions.

Thanks!
Amy Mixon
Ecology & Environment, inc.
220 West Garden Street, Suite 404
Pensacola, FL 32501
(850) 435-8925

Report of Analysis

Client Sample ID:	DELUGE SAMPLING	Date Sampled:	08/22/02
Lab Sample ID:	F14310-1	Date Received:	08/23/02
Matrix:	AQ - Surface Water	Percent Solids:	n/a
Project:	T200208-2138-1		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed By	Method
Alkalinity, Total	84.0	5.0	2.5	mg/l	1	08/28/02 LL	EPA 310.1
Chemical Oxygen Demand	10.6 B	20	2.8	mg/l	1	08/26/02 LL	EPA 410.1
Chloride	75.4	20	10	mg/l	1	08/23/02 LL	EPA 300/SW846 9056
Nitrogen, Nitrate	0.81	0.10	0.050	mg/l	1	08/23/02 LL	EPA 300/SW846 9056
Nitrogen, Nitrate + Nitrite ^a	0.93	0.20		mg/l	1	08/23/02 LL	SM18 4500NO3E
Nitrogen, Nitrite	0.12	0.10	0.050	mg/l	1	08/23/02 LL	EPA 300/SW846 9056
Perchlorate	5.0 U	10	5.0	ug/l	1	08/26/02 LL	EPA 314
Sulfate	72.0	20	10	mg/l	1	08/23/02 LL	EPA 300/SW846 9056

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL



STL

ANALYTICAL REPORT

PROJECT NO. L-9012

Lot #: H3B130234

Jerry Stroebel

Ecology & Environment Inc.
368 Pleasant View Drive
Lancaster, NY 14086

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink that reads "Jamie A. McKinney". The signature is fluid and cursive, with a large loop at the end.

Jamie A. McKinney
Project Manager

February 24, 2003

Severn Trent Laboratories, Inc.
STL Knoxville • 5815 Middlebrook Pike, Knoxville, TN 37921
Tel 865 291 3000 Fax 865 584 4315 • www.stl-inc.com

ECOLOGY & ENVIRONMENT INC.

Client Sample ID: 0302097-01

General Chemistry

Lot-Sample #....: H3B130234-001

Work Order #....: FHJVT

Matrix.....: WR

Date Sampled....: 02/11/03

Date Received...: 02/13/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	4.0	ug/L	EPA-DW1 314.0	02/19/03	3051130

Dilution Factor: 1



STL

ANALYTICAL REPORT

PROJECT NO. L-8982

Lot #: H3B110120

Jerry Stroebel

Ecology & Environment Inc.
368 Pleasant View Drive
Lancaster, NY 14086

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink that reads "Jamie A. McKinney".

Jamie A. McKinney
Project Manager

February 17, 2003

Severn Trent Laboratories, Inc.
STL Knoxville • 5815 Middlebrook Pike, Knoxville, TN 37921
Tel 865 291 3000 Fax 865 584 4315 • www.stl-inc.com

ECOLOGY & ENVIRONMENT INC.

Client Sample ID: 0301270-01

General Chemistry

Lot-Sample #...: H3B110120-001

Work Order #...: FHD5R

Matrix.....: WG

Date Sampled...: 01/30/03

Date Received...: 02/08/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	4.0	ug/L	EPA-DW1 314.0	02/12/03	3044365

Dilution Factor: 1

Delta IV SLC-37 CCAFS Launch 1 Industrial Waste Water Analysis Results

Parameter	Results	DW MCLs
pH		6.5 - 8.5
aluminum	640 ug/l	200 ug/l
antimony	5 ug/l U	6 ug/l
arsenic	5 ug/l U	50 ug/l
barium	20 ug/l U	2000 ug/l
beryllium	3.0 ug/l U	4 ug/l
cadmium	0.6 ug/l	5 ug/l
chromium	3 ug/l	100 ug/l
copper	7.0 ug/l	1000 ug/l
iron	350 ug/l	300 ug/l
lead	3 ug/l U	15 ug/l
manganese	17 ug/l	50 ug/l
mercury	0.2 ug/l U	2 ug/l
molybdenum	5 ug/l U	
nickel	5 ug/l U	100 ug/l
selenium	5 ug/l U	50 ug/l
silver	5.0 ug/l U	100 ug/l
sodium	25.4 mg/l	160 mg/l
thallium	2 ug/l U	2 ug/l
zinc	1230 ug/l	5000 ug/l
Chloride	71 mg/l	250 mg/l
TDS	250 mg/l	500 mg/l
VOCs	U	
SVOCs	U	
PCBs	0.5 ug/l U	0.5 mg/l
Oil and Grease	1.0 mg/l U	
BOD	4 mg/l	
COD	26 mg/l	
Nitrate	0.18 mg/l	10 mg/l
Nitrite	0.03 mg/l	1 mg/l
Total organic nitrogen	0.8 mg/l	
Total Kjeldahl nitrogen	0.75 mg/l	
Total nitrogen	0.9 mg/l	
ammonia as nitrogen	U	
Sulfate	30 mg/l	250 mg/l
Alkalinity	59 mg/l	
TPHs	0.1 mg/l U	
Perchlorates	4 ug/l U	

U= Undetected. In Florida, the number preceding the "U" is the detection limit. A "U" signifies that the substance was undetected at the detection limit.

CalTrans California Department of Transportation

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENVIRONMENTAL ANALYSIS, MS 27
1120 N STREET
O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 653-7507
FAX (916) 653-7757
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

October 5, 2005

Mr. Ed Nieto
Department of Toxic Substances Control
Perchlorate Workshop Comments
P.O. Box 806
Sacramento, CA 95812-0806

Subject: Public Workshop Comments on the Proposed Regulations Chapter 33
Management of Perchlorate Materials

Dear Mr. Nieto:

The California Department of Transportation (Department) appreciates the opportunity to review the draft regulations for Perchlorate Best Management Practices (BMP). The Department also appreciated the opportunity to participate in the Department of Toxic Substance Control (DTSC) sponsored public workshop to discuss the draft regulations held on September 23. The Department's comments on the current version of the draft regulations follow.

In general, the Department recommends that road flares be exempt from the Perchlorate pertaining materials regulations. There is no scientifically defensible evidence to indicate that road flares are anything more than an insignificant contributor to the concentrations of perchlorate found in the environment. Detections of perchlorate along Highway 101 in Santa Clara County have been mentioned as a potential indication of a link between road flares and perchlorate in groundwater. However, the perchlorate plume along Highway 101 emanates from the Former Olin Corporation facility and follows groundwater flow. The groundwater flow direction in this area is nearly parallel to Highway 101, so there is no reason to believe that the perchlorate detected is associated with anything except the Olin facility.

Road flares are used by law enforcement, public works, emergency agencies, and by citizens under hazardous traffic conditions. Requiring that the flares be picked up under these conditions is a much greater danger than any conceivable health benefit.

Specific comments on the proposed regulations are listed below:

§673841.2 Applicability

1. The Department recommends that road flares be added to the list of exemptions under (b) of this section. If road flares are not exempted, then law enforcement, public works, and emergency response agencies should be exempted.

§67384.3 Definitions

2. Please complete definitions. The Department is concerned with the definitions of "Contamination Media", "Non-hazardous" and "Fallout Zone". Please clarify how and at what concentration the material is considered "contaminated" and define the term "Fallout Zone" in a measurable area.

§67384.4 Labeling Requirements for Perchlorate Materials

3. Please clarify whether waste containing perchlorate and specifically waste containing spent or partially spent road flares will require labeling.

§67384.6 Containment Requirements for Perchlorate Materials

4. The Department is in support of Option A - "Exempt consumer goods stored or used, including consumer fireworks, flares, pyrotechnics, model rockets, ammunition, blasting agents, etc."

§67384.7 Notification Requirements for Perchlorate Materials

5. The Department is in support of Option 3, "Eliminate the BMP notification requirement, the reporting requirement, and recordkeeping requirements for perchlorate materials and rely only on business plans for hazardous materials." Road flares would be covered under the business plan requirements based on their hazardous material ignitability characteristics. A duplication of reporting requirements is onerous and unnecessary.

§67384.9 Special Management for Perchlorate Materials.

6. Section (a) Please define the term, "to the extent practical" as it is used in the phrase, "to the extent practical without impeding immediate safety considerations."
7. Section (a)(2) "Flares that are manually extinguished by tapping the burning end, shall be closed by replacing the original cap back onto the flare." This is a concern because of the potential for burns and should be removed from the regulations.

8. Section (a)(3) "Flares that are manually extinguished by dowsing the flare in a container of water, shall collect the wet flares and the water for proper disposal." These procedures also pose a safety concern because it will expose incident personnel to high-speed traffic.
9. Section (a)(5) "If flares can not be promptly collected, flares should be protected from standing water." Please clarify if this section pertains to both partial and completely spent flares.
10. Section (a)(7) "Waste flares shall be collected and managed in accordance with all applicable hazardous waste laws." Spent flares, partially or completely combusted, do not meet the ignitability criteria and therefore are not a hazardous waste.
11. Section (a)(8) "Flares chosen for use should have the minimum burning time (10, 15, 20, or 30 minutes) necessary to ensure safety during a highway incident." The word highway should be replaced with roadway to reflect all traveled ways. Incidents occur off highways and are used by several emergency personnel such as law enforcement, fire, and public works.
12. Section (d) "For releases of non-hazardous perchlorate materials to the environment, a handler of perchlorate materials shall . . ." Please define a non-hazardous waste. At what concentration does a perchlorate waste become hazardous or non-hazardous?
13. Section (d)(4) "Shall decontaminate the spill area." Please define what criteria will be used to determine when a spill is considered decontaminated."
14. The Department recommends that diminutive amounts of perchlorate containing waste be exempt from disposal requirements.

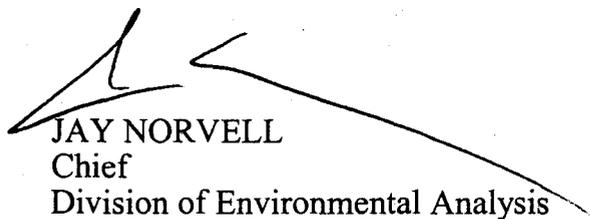
§67384.XX Perchlorate Restrictions

15. Options: "Exempt law enforcement agencies." The Department supports this option, however, all emergency and public work agencies must also be included. Several agencies may use flares during emergencies. For example, in many instances, fire personnel are the first responders on rural highway incidents. They utilize flares to control the scene and provide aid to injured persons. This can also apply to metropolitan areas where law enforcement is further away and may have a longer response time than the local fire personnel.

Mr. Ed Nieto
October 5, 2005
Page 4

Thank you for the opportunity to comment on the draft Perchlorate BMP regulations. Please contact Mike Flake of my staff, at (916) 653-4947, if you would like to discuss these comments. We look forward to continuing to work with you during the development of the Perchlorate BMP regulations and specifically to attending the upcoming public workshop in November.

Sincerely,



JAY NORVELL
Chief
Division of Environmental Analysis

CAPA California Attractions and Parks Association

October 6, 2005

VIA ELECTRONIC TRANSMISSION AND US MAIL

Department of Toxics Substances Control
Attn. Ed Nieto – Perchlorate Workshop Comments
P.O. Box 806
Sacramento, California 95812-0806

Re: Perchlorate Best Management Practices

Dear Mr. Nieto:

We are submitting these comments on the proposed regulations and the definitions that were circulated for discussion purposes prior to the workshop on September 23, 2005. These comments are submitted on behalf of the California Attractions and Parks Association (CAPA), a trade association representing the amusement and water park industry of California.

CAPA's Interest

Amusement parks are a foundation of California's tourism industry and a leading driver of California's economy, producing more than \$10 billion in commerce annually. Both residents and visitors build vacations and family time around visits to California's amusement parks. They take away wonderful memories and photographs enabling them to relive those experiences again and again.

Many of those experiences are built on spectacular displays of fireworks. Many of our CAPA member parks offer regular firework displays and attractions which incorporate fireworks as an integral part of the experience. Parks also conduct closing ceremonies each evening, building a powerful imagery of happy memories with the use of fireworks. Even parks that do not offer regular displays often celebrate special holidays, like the 4th of July with grand fireworks shows. Such celebrations have become a part of the California and American experience.

It is fireworks that lead to the issue of perchlorate. Color is generated in fireworks with oxidizers. Fireworks manufacturers use perchlorate because it is a very good oxidizer; one that is safe and stable. The main alternative oxidizer is chlorate, which was widely used in the pyrotechnics industry before perchlorate. The industry switched to perchlorate because chlorate was unstable and unsafe, and had caused premature detonation during pyrotechnics manufacture, transportation, or handling.

Most of the perchlorate is consumed when the fireworks are detonated. The portion that is not burned falls to the ground. Any unburned or “dud” firework that falls to the ground may also contain perchlorate.

CAPA Workshop Comments

It is CAPA’s belief that the amount of perchlorates used by amusement and theme parks is minimal when compared to the amount of residue left from aviation fuel, road flares and other military and industrial uses.

More importantly, regulations considered which would require the immediate cessation of a firework show in the case of an incompletely burned firework, and the onerous and unnecessary requirements for ground and water testing would make continued use of fireworks by theme parks extremely difficult.

It is our desire to work with you to develop best management practices which are practical, protect the public interest and enable our industry to continue providing firework displays as part of our entertainment.

The following are specific comments on the proposed regulations.

Section 67384.2 Applicability

This section should also exempt combustion residuals of pyrotechnic perchlorate materials. The reason is that virtually all of the perchlorates are consumed during pyrotechnics combustion. The trace quantities that may remain after combustion should be excluded from these regulations that place significant burdens on handlers of perchlorate materials.

Section 67384.3 Definitions

With respect to display fireworks, the regulations need to differentiate between uncombusted display fireworks, such as duds or unburned stars which contain perchlorates, and refuse generated from the combustion of fireworks, such as wires and casings, which contain essentially no perchlorates. As discussed below in the comments on Section 67384.9(c), more stringent best management practices should apply to "uncombusted display fireworks" as compared to "combustion residuals" as defined by the proposed regulations. In that regard we propose the following definition for "uncombusted display fireworks":

"Uncombusted display fireworks" shall mean those portions of display fireworks that did not fully detonate or combust to generate a visual or audible effect.

Section 67384.9(d) imposes stringent requirements for releases of non-hazardous perchlorate materials to the environment, such as immediately stopping the release and

decontamination of the spill area. This proposed regulation clearly contemplates remedies for releases such as spills, dumping, or unauthorized discharges into the waters of the state. However, the launching of a display firework could arguably be construed as a release of a non-hazardous perchlorate material into the environment. If launching of display fireworks is deemed a "release", Section 67384.9(d)(1) would require immediate cessation of the fireworks show. This would clearly be an unintended and unfortunate result, particularly since cleaning up after a fireworks show is addressed in Section 67384.9(c). Therefore, we recommend the following definition:

"Release of perchlorate containing material" shall not include the detonation or combustion of display fireworks, consumer fireworks or pyrotechnics.

Sections 67384.7 and 67384.8 Notification and reporting requirements for perchlorate materials

These sections are unnecessary and essentially duplicate requirements that currently exist under California's hazardous materials business plan inventory requirements, which require reporting of hazardous material inventories. It is worth noting that the statute authorizing the Department to adopt these regulations to "determine the degree to which uniform and adequate requirements already exists, so as to avoid any unnecessary duplication of, or interference with the application of, those existing requirements." Health & Safety Code Section 25210.6(b)(2). In lieu of these proposed regulations, the business plan requirements should be clarified to include reporting quantities of perchlorate materials stored at a facility.

Section 67384.9(c) Special management for perchlorate materials

This section mandates collection of all solid residuals of display fireworks larger than one centimeter in the expected fallout zone the day after a fireworks display. Under this language, an entity that displays fireworks could be subject to civil or criminal penalties if it missed collecting a single 1.1 centimeter fireworks residual in the fallout zone. We believe this is a harsh and unintended result. In lieu of a mandatory residuals collection requirement, we instead recommend that business using display fireworks be required to develop and implement a perchlorate release prevention plan. We recommend that Section 67384.9(c) be deleted in its entirety and replaced by the following language:

A business that uses display fireworks shall adopt a fallout area perchlorate release prevention plan that at a minimum shall implement the following provisions to extent practical:

1. Collection of uncombusted display fireworks within the expected fallout area within 24 hours after a fireworks display.
2. Regularly scheduled cleaning of the expected fallout area to remove combustion residuals.

3. Prior to washdown of the expected fallout area (including rooftops and rain gutters), the expected fallout areas shall be first cleaned to remove combustion residuals and measures shall be implemented to prevent or minimize releases to the storm sewers.
4. Handling, storage and disposal of all collected fireworks residuals in accordance with all applicable laws and regulations.

Any business that uses display fireworks that implements and complies with its perchlorate release prevention plan shall be deemed in compliance with Section 67384.9(d) (requirements for releases of non-hazardous perchlorate materials to the environment). The perchlorate release prevention plan shall be made available to the Department upon request.

Alternatives: Section 67384.XX Perchlorate Restrictions

This language mandating soil and water monitoring for businesses using perchlorate-containing display fireworks, pyrotechnics, or solid rocket motors in amounts greater than 100 pounds in any one month should be stricken in its entirety since this regulation goes well beyond the scope of the statute that authorized promulgation of these regulations.

Health & Safety Code Section 25210.6(a) authorizes the Department to "adopt regulations specifying the best management practices for a person managing perchlorate materials. These practices may include, but not be limited to, all of the following:

- (1) Procedures for documenting the amount of perchlorate materials managed by the facility
- (2) Management practices necessary to prevent releases of perchlorate materials, including, but not limited to, containment standards, usage, processing and transferring practices, and spill response procedures."

Nowhere in this statutory grant of authority is language authorizing adoption of regulations mandating soil and water investigations for business using certain perchlorate materials. Instead, Section 25210.6(a) clearly limits the scope of the regulations to best management practices for managing perchlorate-containing materials.

In addition, existing laws in the Health & Safety and Water Codes already authorize state and local agencies to require soil and water investigations where warranted. As with the proposed notification and reporting requirements for perchlorate materials, the language in Alternatives Section 67384.XX is duplicative of existing state law and is therefore unnecessary

Thank you for considering our comments.

Sincerely,

John Robinson
CEO CAPA

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:37:23 AM
Subject: Fwd: Perchlorate Workshop Comments

>>> "John Robinson" <john.Robinson@capalink.org> 10/07/05 3:50 PM >>>
Dear Mr. Nieto,

Attached are comments on the Perchlorate Best Management Practices Workshop from the California Attractions and Parks Association. We are a trade association which represents all of the theme, amusement, water parks and family entertainment centers in California. Our members range from Pixieland to Disneyland.

I hope you find the comments helpful. Please contact me with any questions.

Sincerely,

John Robinson

John Robinson I CEO I California Attractions and Parks Association I
Ph. 916.448.4148 I Fax 916.448.4248 I

CAPA I 1011 10th Street I Suite 150 I Sacramento, CA 95814 I

CHP **California Highway Patrol**

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

P. O. Box 942898
Sacramento, California 94298-0001
(916) 657-7152
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)



October 7, 2005

File No.: 1.A9293.051.05-1021

Mr. Leonard E. Robinson
Acting Director
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Dear Mr. Robinson:

After participating in the Perchlorate Best Management Practices workshop on September 23, 2005, the California Highway Patrol (CHP) strongly believes the proposed regulations for handling perchlorate as they relate to road flares pose a significant threat to officer and public safety. The CHP strongly believes that for the safety of the residents of California, and the public safety agencies that serve them, these regulations must be revised. Outlined below are specific recommendations that would help to address our concerns.

Section 67384.3, Definitions

The CHP proposes adding a definition of "public safety activity," as follows:

"Public Safety Activity" means any activity intended to protect people or property, including, but not limited to, law enforcement services, fire protection and suppression, emergency medical care, tow operations, emergency services, public utility service and repair, homeland security, and highway maintenance and repair.

If clarification of the term highway is needed, we recommend the definition in Section 360 of the Vehicle Code be used.

Section 67384.6, Containment requirements for perchlorate materials

Based upon the physical characteristics of road flares, the requirements of this section appear to be met without additional containment requirements when storing road flares. Further clarification of these requirements may be helpful to ensure unnecessary costs are not incurred due to a misunderstanding of the requirements of this section.

Section 67384.8, Reporting requirements for perchlorate materials

The annual reporting requirements of this section are overly burdensome and duplicate existing law regarding business plans relative to perchlorate storage. The CHP recommends this requirement be eliminated.

Section 67384.9, Special Management for perchlorate materials

As stated in our previous letter of September 22, 2005, and in subsequent discussions, the CHP has many significant concerns about these proposed regulations as they relate to public safety activity. In response to these concerns, the CHP proposes they be amended in a manner that minimizes releases of perchlorate to the environment and maintains the safety of public safety personnel and the motoring public.

While recommending that extinguishing flares by manually tapping when safe to do so rather than placing in water seems reasonable, the requirement to recap and collect the flares is not. The temperature of the burnt end of a flare 30 seconds after it is extinguished is over 500 degrees. Placing a plastic cap on a flare at such high temperatures is unsafe and would melt the cap. Since extinguishing flares is the last thing to be done before clearing a collision scene, even a requirement to cap a flare after it cools would not be reasonable because it would extend the time our personnel are exposed to the dangers of traffic. The high temperatures of flares along with the other safety issues previously pointed out also make it unreasonable to require the collection of flares.

Subsection (d) requires clarification to provide applicability to when perchlorate materials are spilled. As written, subsection (d) could be interpreted to require immediate action including extinguishing and decontamination of the ash every time a road flare is used.

The following is the CHP's proposed verbiage for this section:

(a) Road safety flares should be used in a manner that minimizes releases of perchlorate to the environment. As many of the following practices should be implemented to the extent practical without impeding immediate public or first responder safety considerations:

(1) Flares should be allowed to burn completely.

(2) Flares that are manually extinguished should be done so by tapping the burning end.

(3) Flares used at an emergency incident should be limited in number and duration necessary to ensure public safety during that incident.

(4) Personnel that routinely use flares in the normal course of their employment should receive instruction on the environmental risks of flares and current perchlorate Best Management Practice requirements of this section.

(b) Marine safety flares should be used in a manner that minimizes releases of perchlorate to the environment.

(c) The solid residuals of display fireworks measuring greater than a centimeter within the expected fallout area shall be collected the day after the firework display.

Mr. Leonard E. Robinson
October 7, 2005
Page 3

Section 67384.10, Discharge/Disposal Restrictions for perchlorate materials

Due to the safety considerations previously outlined, the CHP proposes to add exemptions to this regulation as follows:

(c) Perchlorate containing materials classified as household waste shall be exempt from the discharge/disposal requirements of this section.

(d) Solid non-hazardous perchlorate containing waste derived from public safety activity shall be exempt from the discharge/disposal requirements of this section.

Section 67384.XX, Perchlorate Restrictions

The requirement to prepare and submit a product alternatives report every five years is not reasonable and is overly costly. The CHP will continue to evaluate current and emerging technologies. Due to the nature of many of these products, it is not cost effective to spend time preparing a formal analysis of every product on the market. While not reasonable to require a report every five years, it is reasonable to provide a copy of any product evaluation study. The CHP proposes to add a reporting requirement as follows:

(d) Notwithstanding subdivision (a), a local, state, or federal agency involved in public safety activity should submit to the Department any road safety flare product substitution analysis completed.

The CHP requests that you favorably consider these amendments to your proposed regulations as the most practical and safe solution to your legislative mandate and our concerns about maintaining the safety of public safety personnel and the residents of California.

If you have any further questions or requests, please contact me or Assistant Chief Scott MacGregor at (916) 657-7248.

Sincerely,



M. L. BROWN
Commissioner

LOS ANGELES POLICE DEPARTMENT



WILLIAM J. BRATTON
Chief of Police

P.O. Box 30158
Los Angeles, Calif. 90030
Telephone: (213) 485-4111
TDD: (877) 275-5273
Ref #: 3.3.1

ANTONIO R. VILLARAIGOSA
Mayor

October 6, 2005

Mr. Leonard E. Robinson
Acting Director
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Dear Mr. Robinson:

The Los Angeles Police Department recently received information regarding your proposal of "Best Management Practices" for products containing perchlorate (Assembly Bill 826, Chapter 608). Our Department currently uses road flares that contain perchlorate, and our officers are thoroughly trained in the academy on the proper use of these road flares.

We recently concluded an evaluation of devices that could potentially replace road flares that contain perchlorate. The devices were evaluated for daytime and nighttime visibility, and durability. We found that most of the devices displayed low visibility during daylight conditions. This would increase the potential of motorists failing to recognize a daytime traffic hazard, which would place our officers in danger. Nighttime testing revealed several devices were no longer visible when overturned.

Any device placed in the roadway, as a flare replacement, has the potential of being run over by oncoming traffic. The devices we tested were run over twice by a standard size vehicle at a speed of 35 miles per hour. Several devices sustained extensive damage. The continual replacement of flare alternatives due to damage would be an unwelcome expense for our Department. Also, officers must retrieve these devices after each use. This in itself creates a potential for an officer to be struck by an oncoming motorist during the retrieval process, which is unacceptable.

Our Department recently reviewed the California Highway Patrol (CHP) response to your department's proposed Best Management Practices for products containing perchlorate. We concur with the CHP regarding road flare usage, extinguishing, retrieval, and containment. Therefore, I ask that you consider the concerns of our Department in your draft proposal of Best Management Practices for products containing perchlorate.

Pg. 2

Mr. Leonard E. Robinson

If you have any questions, please contact Sergeant Richard Thomas, Officer in Charge, Special Projects Unit, Planning and Research Division, at (213) 202-5626.

Very truly yours,



WILLIAM J. BRATTON
Chief of Police

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:34:43 AM
Subject: Fwd: FW: Proposed Perchlorate Best Management Practices Regulations

>>> "Holmes, Robert" <rholmes@CIWMB.ca.gov> 10/07/05 1:11 PM >>>

> Mr. Nieto,

>

> Integrated Waste Management Board (IWMB) staff reviewed the Department of Toxic Substances Control's (DTSC) Perchlorate BMP Draft Language dated September 16, 2005 and offer the following comments. Our comments relate largely to the disposal restrictions in proposed subsection 67384.10(a), as follows:

>

> §67384.10 Discharge/Disposal Restrictions for perchlorate materials
> (a) Solid non-hazardous perchlorate containing waste shall be disposed of in either a hazardous waste landfill, or in a composite-lined portion of a non-hazardous waste landfill that meets all requirements applicable to disposal of municipal solid waste in California after October 9, 1993.

>

> Owners/operators (O/O) of solid waste landfills are responsible for assuring, through load check programs, that the wastes they receive are wastes they are allowed to accept pursuant to state law and permit conditions. The local enforcement agencies (LEA) that regulate landfills are responsible for assuring that the landfills comply with these load check requirements. Some communities in the state are still served by landfills that are not fully composite-lined.

>

> With the proposed disposal restriction in these regulations, O/O of non composite-lined landfills (or non composite-lined units) will need to enhance their load check programs to included identification of all wastes containing greater than 6 ppb perchlorate. O/O of landfills with composite-lined landfills will need to enhance their load check programs to include identification of hazardous perchlorate-containing wastes. We are very concerned about the practicality of enforcing these regulations, particularly how LEAs and O/Os will be able to readily identify these wastes. Therefore, we believe it would be critical for DTSC to include specific provisions in this rulemaking to assist landfill O/Os with the identification and classification of perchlorate-containing waste to maximize compliance with the disposal restriction. For example, expanding the labeling requirements of section 67384.4 to apply to wastes would help.

>

> Beyond the specific proposed regulation language, please be aware that IWMB staff see the need for DTSC to conduct an education and public awareness campaign for these regulations. For the disposal restriction to be effective, the solid waste management infrastructure (i.e., landfills, transfer stations, hauling companies, local public works agencies), LEAs, and homeowners will all need to be brought up to speed with the new requirements. Specific training for the solid waste management industry (public and private) and regulators may also be necessary.

>
> Robert Holmes
> Permitting and Enforcement Division
> Integrated Waste Management Board
> 1001 I Street
> PO Box 4025
> Sacramento, CA 95812
> (916) 341-6376

CSAA California State Automobile Association



SERVING THE MOTORIST SINCE 1900



California State
Automobile Association

Automobile Club of
Southern California

980 NINTH STREET, SUITE 2080, SACRAMENTO, CA 95814-2735 • TEL: (916) 443-2577 • FAX: (916) 448-1145

October 7, 2005

Edward Nieto
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95814

RE: Perchlorate Best Management Practices (BMP's)

Dear Mr. Nieto:

The Automobile Club of Southern California and the California State Automobile Association (the AAA Clubs) provide the following comments to the Best Management Practices rules proposed by your department for products containing perchlorate. Specifically, we are concerned about the effects the rules would have on road flare usage by tow trucks responding to emergency situations or hazardous road conditions.

The AAA Clubs provide training to personnel on the proper use of emergency flares, including when they should be used, effective placement of flares and extinguishing the flares. Emergency flares are commonly used at collisions and other roadside situations because they are universally understood and are unrivaled in their effectiveness in notifying motorists of a hazardous condition thereby protecting both motorist(s) and any emergency personnel at the scene, including law enforcement, tow operators, and medical technicians. While we understand the motivation behind some of the proposed rules on flare usage, they would unreasonably restrict the use of roadside flares, which would place emergency personnel and motorists at increased risk of serious harm.

Specifically, we list below a few of the more significant issues we have concerning the application of the proposed regulations on flare usage.

- Retrieving partially-burned flares and/or residual ashes would place a responding service technician in severe *additional* danger. The scenes of accidents or other roadway hazards are already dangerous work areas because the eyes of other motorists tend to be drawn to the accident scene, or whatever is impeding the flow of traffic.

- Time is of the essence for service technicians. For safety reasons, service technicians must retain the ability to perform the immediate service required (removal of vehicles) and leave the scene.
- Time is also of the essence in restoring the original flow of traffic. The time required clearing accident-related debris and removing spilled gasoline, for example, already significantly impedes traffic. Adding time for retrieving and capping partially-burned flares and removing the residual ashes adds time to the overall clean-up, further impeding traffic and creates the potential for additional traffic accidents in the back-up, as well as increased vehicle emissions.
- Currently, tow trucks and flat bed carriers do not carry buckets of water for disposal of partially burned flares. Space limitations on truck beds exist. Furthermore, service providers must carry emergency supplies of fuel for member service requests (a 3-gallon minimum fuel container is required for compliance with the CHP regulations). Placing partially-burned flares in proximity to a fuel source or other combustible liquids from towed vehicles creates a safety hazard.
- Service providers may, or may not, have licensing to haul and dispose of hazardous waste. The adverse financial impact imposed upon the service provider network to implement the reporting requirements and acquire the additional training and required licensing of the proposed legislation, weighed against a yet-to-be-determined implementation benefit, is unreasonable.

As we noted above, emergency flares are a cost effective and unrivaled method of warning motorists of emergency incidents and controlling traffic around accident scenes. The AAA Clubs respectfully request that the department reconsider implementing these regulations, as proposed, because these regulations unreasonably increase the danger to the public and emergency personnel.

Respectfully Submitted


Paula LaBrie
Legislative Counsel
California State Automobile Association


Tim Chang
Legislative Counsel
Automobile Club of Southern California

CSSA California State Sheriffs' Association



Officers

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Bill Kolender
Sheriff, San Diego County

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Sheriff, Contra Costa County

Steve Szalay
Executive Director

Nick Warner
Legislative Director

Martin J. Mayer
General Counsel

California State Sheriffs' Association

Organization Founded by the Sheriffs in 1894

October 3, 2005

Department of Toxic Substances Control
Attn: Ed Nieto - Perchlorate Workshop Comments
P.O. Box 806
Sacramento, California 95812-0806

Re: Emergency Regulations for the Best Management Practices: Road Flares

Dear Mr. Nieto:

On behalf of the California State Sheriffs' Association (CSSA). I am writing to comment on the emergency regulations proposal your department has prepared regarding Best Management Practices for products containing perchlorate as required by AB 826 (Chapter 608-2003). We are particularly concerned with how these regulations would impact law enforcement's ability to use road flares and the risk to public safety.

As I am sure you know, road flares are used at collision and other emergency scenes to close lanes, divert traffic around hazardous locations, and to provide protection to emergency personnel on the scene of traffic incidents. Due to the varied roadway and weather conditions found in California, road flares have been the most common and effective method of traffic control utilized by law enforcement and other public safety agencies. Any restrictions on the use of highway flares would place officers, other emergency responders, and the motoring public in jeopardy of serious injury or death.

On average, more than 130 officers are killed feloniously or accidentally each year in the United States. Being struck by errant vehicles is the third leading cause of on-duty deaths, similar to the risk of being killed in a traffic pursuit/stop, in ambush situations, and in responding to disturbance calls.

The proposed regulations for Special Management for Perchlorate Materials – Section 67384.9, require road safety flares to be used in a manner that minimizes releases of perchlorate to the environment. It states that the best practices listed are to be implemented to the *extent practical without impeding immediate safety considerations*. CSSA believes that specific training regarding perchlorate and its hazards could be incorporated into existing officer training to address this regulation.

While we are mindful and appreciate the concerns with perchlorate contamination from the use of road flares, we must insist that any approach to the issue involving road flares must have a high level of practicality to ensure that our officers and other emergency responders have the ability to warn and control traffic in the most efficient and safe means available. In establishing any of these proposed regulations related to the use and deployment of road flares, it is critical to weigh the unknown impact from perchlorate-containing flares and the very real threat to public safety these flare restrictions would have.

We welcome the opportunity to further discuss these matters with you. Please feel free to contact CSSA's Legislative Director Nick Warner at 916-443-7318 or CSSA's Legislative Analyst Cathy Coyne at 916-375-8000. Thank you for your attention to our concerns.

Sincerely,

William B. Kolender, President
Sheriff, San Diego County

WBK/cmc

October 3, 2005

Page 2 ---

cc: All California Sheriffs
Steve Szalay, CSSA Executive Director
Nick Warner, CSSA Legislative Director

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/5/2005 12:26:08 PM
Subject: Fwd: RE: Written Comments Requested Emergency Regulations on use of Road Flares

FYI

>>> "Cathy Coyne" <ccoyme@calsheriffs.org> 10/05/05 11:20 AM >>>
Attached you will find CSSA's comment on Road Flares.

<<2005RoadFlareEmergencyRegulations100305.doc>>

Cathy Coyne, Legislative Analyst
California State Sheriffs' Association
1450 Halyard Drive, Suite 6
West Sacramento, CA 95691
ccoyme@calsheriffs.org
916-375-8000 Phone / 916-375-8017 Fax

DOD Department of Defense

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:39:26 AM
Subject: Fwd: FW: Perchlorate BMP

DODs

>>> "Faryan, Marykay CIV N05" <marykay.faryan@navy.mil> 10/07/05 4:07 PM >>>

Peggy/Ed - Thanks for much for the opportunity to work these issues with you.
Attached please find DODREC 9 comments on the developing perchlorate BMP reg.
We will fed ex a hard copy of the signed document and supporting documents as well. Thank you for your time. MKF

Mary Kay Faryan
DOD Regional Environmental Coordinator Counsel
937 N. Harbor Drive (Suite #100)
SD, CA 92132
marykay.faryan@navy.mil
work 619-532-4301
fax #1426
cell 619-954-8992

> -----Original Message-----

> From: Espejo, Romeo CIV N05
> Sent: Friday, October 07, 2005 12:29
> To: Faryan, Marykay CIV N05
> Subject: Perchlorate BMP

>

> > <<Attachment 1.pdf>> > > <<Attachment 2.pdf>> > > <<Attachment 3.pdf>>
> > <<Attachment 4.pdf>> > > <<Untitled>>

From: "Raines, Richard H CIV NFECSSW" <richard.h.raines@navy.mil>
To: "Faryan, Marykay CIV N05" <marykay.faryan@navy.mil>
Date: 10/7/2005 4:03:57 PM

FBPD Fort Bragg Police Department



FORT BRAGG POLICE DEPARTMENT

**250 Cypress Street
Fort Bragg, CA 95437-5437**

RUSSELL L. THOMAS
Chief of Police

(707) 961-2800
Fax: **(707) 961-2806**

Department Of Toxic Substances Control
Attn: Ed Nieto – Perchlorate Workshop Comments
Post Office Box 806
Sacramento, Ca 95812-0806

October 6, 2005

Dear Mr. Nieto:

I am writing on behalf on our Department and City regarding the emergency rulemaking proposal your Department has prepared regarding the Best Management Practices for products containing perchlorate as required by AB826 (Statutes of 2003, Chapter 608), and how this regulation will effect the use of road flares by our Police, Fire and Public Works crews.

Road flares are used at several types of emergency incidents where the roadway is blocked or restricted by victims, vehicles and/or debris, or when the safety of any first responder is an issue. As our west city limit is the Pacific Ocean, we are often inundated with inclement weather, and the road flare has been the best method of traffic control utilized by our first responders, rain or shine. Any restrictions placed upon the use of road flares would place our employees, as well as other emergency responders including air and ground ambulance crews, fire and/or rescue units, along with both citizens and visitors alike in jeopardy of injury or death at such an incident.

Road flares are universally understood by motor vehicle drivers that there may be an emergency ahead, and most drivers immediately slow down as they approach them. The flares are equally bright and visible during day or night use. Our department utilizes a battery-operated product during public events such as DUI Checkpoints. These lights do not, however, have the brightness capacity as a flare, especially during the daylight hours, and are not as recognizable as a road flare to the motoring public. In an emergency, this again can mean the difference between major injury and life or death. And these devices are extremely costly. If you mandate your proposed regulations, do you not create an unfunded state-mandate for public agencies?

Requiring first responder agencies to collect flare debris would be detrimental to our operations. First the flares are hot and dangerous to touch. Even flares that have been extinguished remain hot and unsafe for a period of time. Requiring an officer to place an extinguished flare in the back of a patrol vehicle is asking for a potential disaster to both the officer and the vehicle / equipment. Police vehicles contain extensive equipment in the trunk space, including weapons and ammunition, electronic / radio communication equipment, first aid and resuscitation equipment, evidence collection equipment, and much more. Fire,

rescue and ambulance vehicles have similar equipment and restrictions. Secondly, requiring officers / personnel to return at a later time to collect this debris can be both dangerous to the employee as well as inappropriate use of public funds.

The California Commission on Peace Officers Standards and Training (POST) has a core curriculum for all peace officer candidates attending a police academy regarding the use of, extinguishing and disposal of road flares. I am sure Fire and City Public Works personnel have similar training. While we do not oppose any addition to the instruction curriculum, annual training may be more than necessary. Two or three-year updates may be more appropriate.

Your proposed requirement to main records on the use of road flares, and to report on that use annually is what we believe to be a further unnecessary requirement, and yet another unfunded state-mandate for public agencies.

We would strongly propose that public agencies be exempt from your requirements, and request that you include this exemption in your proposed Perchlorate Best Management Practices.

Sincerely,

Floyd E. Higdon, Lieutenant
Acting Chief of Police

C: Steve Orsi, Chief, Fort Bragg Fire Department

From: Eduardo Nieto
To: WBeckman@dtsc.ca.gov,ERodrigu@dtsc.ca.gov
Date: 10/6/2005 6:48:28 PM
Subject: Fwd: Perchlorate Workshop Committee

Similar comments as CHP

Ed Nieto
Department of Toxic Substances Control
(916) 322-7893

From: "Higdon, Floyd" <fhigdon@ci.fort-bragg.ca.us>
To: 'Ed Nieto' <enieto@dtsc.ca.gov>
Date: 10/6/2005 5:56:43 PM
Subject: Perchlorate Workshop Committee

Please find attached our agencies response to the proposed DTSC emergency regulations on road flare use.

Thank you

Floyd E. Higdon, Lieutenant
Fort Bragg Police Department
Office: (707) 961-2800
Fax: (707) 961-2806
email: fhigdon@ci.fort-bragg.ca.us

<<05-1005 -- Perchlorate Best Practices.doc>>

CC: "Thomas, Russ" <rthomas@ci.fort-bragg.ca.us>

FFD **Fresno Fire Department**



Randy R. Bruegman
Fire Chief

Bureau of Training and Support Services
1144 E Street
Fresno, California 93706-3307
(559) 621-4200 FAX (559) 488-1001
www.fresno.gov

October 6, 2005

Department of Toxic Substance Control
Attn: Ed Nieto – Per-chlorate Workshop Comments
P. O. Box 806
Sacramento, CA 95812-0806

Dear Mr. Nieto:

I am writing to comment on the emergency rulemaking proposal your department has prepared regarding the Best Management Practices for products containing per-chlorate as required by AB 826 (Statutes of 2003, Chapter 608.) I am particularly concerned with how these regulations would impact the Fresno City Fire Department's ability to use road flares.

The use of road flares by our department is critical for our safety when working on or near roadways. Any restrictions on the use of highway flares would place our crews in jeopardy of serious injury for death.

Picking up or moving flares that are actively burning are incredibly dangerous. The heat from these flares will cause serious burns and injuries. We currently have no personal protective equipment that will protect us from direct flame contact from a road flare, due to their incredibly high heat. If any of our personal protective equipment comes in direct flame contact from a road flare, the damage will be severe enough to take that piece of equipment out of service.

The proper extinguishment method is to let them burn out completely. Any other method has the possibility of causing serious injuries. Stepping on, throwing or extinguishing in water will cause violent reactions. These reactions include increasing burning, popping or a false extinguishment, which may reignite without warning.

Department of Toxic Substance Control
Attn: Ed Nieto – Per-chlorate Workshop Comments
October 6, 2005
Page 2

Road flares are essential for our personnel to work in and around roadways. Any change in the law requiring us to remove and pick up road flares will greatly increase our chance for injury and death. I would like to strongly encourage you to make law enforcement and fire departments exempt from this requirement – our lives and safety are at risk.

Sincerely,



Daniel O'Meara
Fire Captain

DMO:jh

HASA HASA Inc.

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/6/2005 1:04:04 PM
Subject: Fwd: Perchlorate BMP Workshop Comments

FYI

>>> "Dave Johnson" <daj@hasapool.com> 10/06/05 11:35 AM >>>

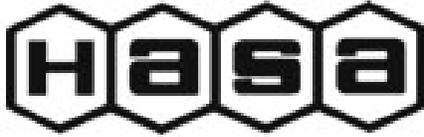
Edward,

Please see attached comments concerning the Best Management Practices for perchlorate containing materials.

Please feel free to contact me if you have any questions or comments. I can be reached at (925) 432-3866.

Thanks

Dave Johnson
EHS Manager
Hasa Inc.



October 3, 2005

Department of Toxic Substance Control
P.O. Box 806
Sacramento, CA 95812-0806
Attention: Ed Nieto – Perchlorate Workshop Comments

Re: Perchlorate Best Management Practices (BMP) Comments

Dear Mr. Nieto,

Presented below are comments from Hasa Inc., concerning the rulemaking process for Assembly Bill AB 826 regarding Best Management Practices (BMP) for perchlorate containing materials. Hasa Inc. is a manufacturer of sodium hypochlorite and a distributor of pool sanitizers and water treatment additives.

Hasa believes that no additional Best Management Practices are necessary for sodium hypochlorite pool sanitizers because existing Federal and State hazardous materials, storm water, and pesticide regulations adequately address appropriate Best Management Practices for the handling, storage, use, and disposal of these products.

At the August 19, 2005 and September 23, 2005 perchlorate workshops, the Department of Toxic Substances Control (DTSC) discussed the proposed BMPs for labeling, packaging, containment, notification, reporting, and disposal/discharge of perchlorate containing materials. The following comments address each of these areas in more detail:

Labeling

No additional labeling BMPs should be implemented because existing Federal and State EPA pesticide labeling requirements and regulations meet the Department of Toxic Substances Control's (DTSC) proposed BMPs for handling, storage, and disposal.

- Federal and state EPA pesticide regulations define specific labeling requirements concerning environmental and physical hazards as well as storage and disposal requirements for pesticide products.

- See Federal EPA's "*Reregistration Eligibility Document for Sodium and Calcium Hypochlorite Salts*" and EPA's "*Guidance for the reregistration of pesticide products containing as the active ingredient sodium and calcium hypochlorite salts*" for further regulation requirements for the labeling of these products.
- Department of Transportation regulations have strict labeling requirements for hazardous materials and hazardous waste products.
- Applicable regulations include Department of Transportation (DOT) and Environmental Protection Agency (EPA) regulations - CFR 49 §172, CFR 40 §156.10 – 212, CFR 40 §152.50, CFR 40 §262.31.

Packaging

No additional BMPs are necessary for packaging because existing Department of Transportation (DOT) regulations for hazardous materials and hazardous waste meets proposed BMPs for packaging.

- Applicable regulations: CFR 49 §172, 173, 178, 179, CFR 40 §157.20-36, CFR 40 §262.30

Containment

No additional BMPs are necessary because existing packaging requirements meet section 67384.5 packaging requirements of proposed BMPs and have containment requirements under existing Fire Code & DOT regulations for hazardous materials.

- Applicable regulations: CFR 49 §172, 173, CFR 40 §264.193, UFC 8003.1.3.3

Notification

No additional BMPs should be implemented because existing Federal EPA and Cal / EPA Pesticide notification regulations and hazardous material regulations meet proposed BMPs.

- Pesticides must be registered with the Federal EPA and with the Department of Pesticide Regulation (DPR) prior to sale of product.
- Quantity of product produced is reported quarterly to the Department of Pesticide Regulation, and annually to the Federal EPA.
- Applicable regulations: CFR 40 §152.15, 50, CFR 40 §167.20, CFR 40 §302.6, CFR 40 §355.40, UFC 8001.3.3

Reporting

No additional BMPs should be implemented because existing Federal EPA and Cal / EPA Pesticide reporting regulations and hazardous material regulations meet proposed BMPs.

- Quantity of product produced is reported quarterly to the Department of Pesticide Regulation, and annually to the Federal EPA.
- Spills must be reported under existing DOT and EPA reporting regulations.
- Applicable regulations: CFR 49 §171.15-16, CFR 40 §167.85, CFR 40 §370.25, 30

Recordkeeping

No additional BMPs should be implemented because existing Federal EPA and Cal / EPA Pesticide recordkeeping regulations and hazardous material regulations meet proposed BMPs.

- Quantity of product produced is reported quarterly to the Department of Pesticide Regulation, and annually to the Federal EPA.
- Spills must be reported under existing DOT and EPA reporting regulations.
- Applicable regulations: CFR 49 §171.15-16, CFR 40 §167.85, CFR 40 §370.25, 30, CFR 40 §157.36, CFR 40 §169.2, CFR §262.40, CFR §372.10

Discharge / Disposal

No additional BMPs are necessary because existing DOT / EPA spill regulations and storm water and waste water regulations provide adequate BMPs for the discharge and disposal.

- Spilled material is required to be disposed as a hazardous waste under federal DOT regulations and state DTSC regulations.
- Applicable regulations: CFR 40 §122.1.

Education / Training

No additional BMPs are necessary because existing hazardous materials and hazardous waste regulations provide for training requirements for the proper handling, storage, use, and disposal of hazardous materials and wastes.

- Applicable regulations: CFR 49 §172.600, 700, CFR 40 §170.130, CFR 40 §264.16, CFR 29 §1910.1200.

DTSC
October 3, 2005

General Comments

Hasa appreciates the opportunity to work with the Department of Toxic Substance Control on the development of this rulemaking process. As indicated in our above comments, Hasa believes that pool sanitizers are sufficiently regulated with existing Federal and State hazardous materials, hazardous waste, and pesticide regulations.

We urge DTSC to review the information and regulatory references we have presented above, consider existing regulations before implementing additional Best Management Practices, that may impose duplicative regulations from multiple state and federal agencies, and evaluate the benefit of new BMPs and the potential burden on the regulated community (public, private, & industry).

If DTSC has any questions or comments, please contact myself at (925) 432-3866.

Sincerely,

Dave Johnson
EHS Manager
Hasa Inc.

HB Hanson Bridgett
(MP Associates, Pyro Spectaculars)

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:37:02 AM
Subject: Fwd: BMP submittal re:Pyrotechnics

I sent an acknowledgment

>>> "Eric Newman" <enewman@ka-pow.com> 10/07/05 3:12 PM >>>
Please acknowledge your receipt of the enclosed comments (which are also being hand delivered) related to pyrotechnic materials on DTSC's current proposal to establish BMPs for perchlorate containing materials. Thank you for working with us on this tough issue.

<<Perchlorate BMPs - cover ltr in COLOR.pdf>> <<PerchlorateBMPs-draft changes COLOR.pdf>>

IWMB Integrated Waste Management Board

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:34:43 AM
Subject: Fwd: FW: Proposed Perchlorate Best Management Practices Regulations

>>> "Holmes, Robert" <rholmes@CIWMB.ca.gov> 10/07/05 1:11 PM >>>

> Mr. Nieto,

>

> Integrated Waste Management Board (IWMB) staff reviewed the Department of Toxic Substances Control's (DTSC) Perchlorate BMP Draft Language dated September 16, 2005 and offer the following comments. Our comments relate largely to the disposal restrictions in proposed subsection 67384.10(a), as follows:

>

> §67384.10 Discharge/Disposal Restrictions for perchlorate materials

> (a) Solid non-hazardous perchlorate containing waste shall be disposed of in either a hazardous waste landfill, or in a composite-lined portion of a non-hazardous waste landfill that meets all requirements applicable to disposal of municipal solid waste in California after October 9, 1993.

>

> Owners/operators (O/O) of solid waste landfills are responsible for assuring, through load check programs, that the wastes they receive are wastes they are allowed to accept pursuant to state law and permit conditions. The local enforcement agencies (LEA) that regulate landfills are responsible for assuring that the landfills comply with these load check requirements. Some communities in the state are still served by landfills that are not fully composite-lined.

>

> With the proposed disposal restriction in these regulations, O/O of non composite-lined landfills (or non composite-lined units) will need to enhance their load check programs to include identification of all wastes containing greater than 6 ppb perchlorate. O/O of landfills with composite-lined landfills will need to enhance their load check programs to include identification of hazardous perchlorate-containing wastes. We are very concerned about the practicality of enforcing these regulations, particularly how LEAs and O/Os will be able to readily identify these wastes. Therefore, we believe it would be critical for DTSC to include specific provisions in this rulemaking to assist landfill O/Os with the identification and classification of perchlorate-containing waste to maximize compliance with the disposal restriction. For example, expanding the labeling requirements of section 67384.4 to apply to wastes would help.

>

> Beyond the specific proposed regulation language, please be aware that IWMB staff see the need for DTSC to conduct an education and public awareness campaign for these regulations. For the disposal restriction to be effective, the solid waste management infrastructure (i.e., landfills, transfer stations, hauling companies, local public works agencies), LEAs, and homeowners will all need to be brought up to speed with the new requirements. Specific training for the solid waste management industry (public and private) and regulators may also be necessary.

>

> Robert Holmes
> Permitting and Enforcement Division
> Integrated Waste Management Board
> 1001 I Street
> PO Box 4025
> Sacramento, CA 95812
> (916) 341-6376

PC

Paul R. Curry and Associates

Olin Off the Hook?

Wednesday, September 07, 2005

By Matt King

San Martin - An important piece of the perchlorate puzzle should soon be in place.

Armed with federal dollars, the Santa Clara Valley Water District will try to figure out just how much of the perchlorate in South County's groundwater can be pinned to the Olin Corp.'s former road-flare factory in Morgan Hill.

The company has assumed responsibility for much of the contamination. But Olin also maintains that some of the pollution is from other sources, and that it shouldn't be held solely responsible for cleaning the Llagas sub-basin.

Tom Mohr, an engineer with the water district, said new tests may prove Olin right. And without a clear understanding of where the perchlorate is coming from, it will be hard to clean the groundwater basin.

"It appears pretty obvious that here is a plume emanating from the Olin site and flowing southward," Mohr said recently. "If you look at the map there are detections in unexpected locations. Olin is an obvious source, but we may have made a forgone conclusion based on where we expected perchlorate to be. Because we don't know with any clarity, we want to learn if there is a background perchlorate level."

Since the pollution was revealed in January 2003, Olin and the water district have conducted hundreds of tests on wells from Morgan Hill to Gilroy. Most of those tests have conformed to a pattern consistent with the Olin plume. But tests have also found perchlorate in outlying areas, and most puzzling, north of the site. Those results point to other possible polluters or contamination from natural causes. A series of studies in other areas of the country have shown how hard it can be to draw a bright line between a source and contamination.

"We can't afford to ignore what's happening in the rest of the country," Mohr said, referring to a Texas study that suggests perchlorate is found in rain, ozone and lightning, and another in Massachusetts that blamed perchlorate pollution on expired household bleach. "Remote, or even 'Twilight Zone,' as these sources may be, none of them are impossible."

All along, Olin has tried to leaven its responsibility with arguments that South County's perchlorate comes from many sources, including rocket testing at the now-closed United Technology Corp. plant in Coyote, and road flares used on U.S. Route 101.

"There are many different areas where we believe there is at least one other source," said Rick McClure, Olin's perchlorate project manager. "There is a distribution of perchlorate in some unusual locations."

For now, the agency directing the cleanup effort will operate as though Olin is the sole polluter, though David Athey, of the Central Coast Regional Water Resources Control Board, said he will “keep an open mind.”

“If there are any other sources of perchlorate, Olin hasn’t shown any proof,” Athey said Tuesday. “Most, if not all of it, is coming from Olin. There’s pretty good evidence now, but we’re going to keep an open mind.”

Olin has also vehemently maintained that it is not responsible for the perchlorate northeast of the site. The water district will also test that region with new forensic methods that hold the possibility of settling that question.

Just how much the results - Mohr expects the testing to take about a year - will influence the cleanup is unclear. Olin must propose a cleanup level by Jan. 31, 2006, and a final plan by June 30. But if the tests reveal other sources of perchlorate, the company may not have to do all of the cleaning on its own. In a worst-case scenario for county residents, cleanup costs could be passed along to water users.

“I don’t know how a big a role it would play,” Athey said. “The discharger has to address their portion of the discharge. If there is another discharger, that will come into play when we do the corrective action plan. Anything’s on the table right now because we just don’t know.”

What is perchlorate?

Perchlorate is a salt used to make rocket fuel, highway flares, matches and air bag

accelerators. It can interfere with thyroid activity, especially in small children and pregnant women, but the scientific

community is split over how much perchlorate is too much.

How did Perchlorate end up in San Martin?

The Olin. Corp. polluted South County’s at its now-abandoned road-flare factory on Railroad Avenue in Morgan Hill. Earlier this summer, a federal jury exonerated the company on charges that it did so knowingly.

What Happens Next?

- The Santa Clara Valley Water District and Olin will conduct separate studies to determine if there are sources of perchlorate other than Olin’s factory. Those studies will help gauge Olin’s responsibility and guide the company’s cleanup efforts.
- The district will test the area north of the Olin factory to find the source of that contamination. Olin says it’s not responsible for any pollution north of the factory.

- The district will test whether pumping clean water through recharge ponds will clean the groundwater.



Matt King

Matt King covers Santa Clara County for The Dispatch. He can be reached at 847-7240 or mking@gilroydispatch.com.

SCVWD to test for pollution source
Thursday, February 24, 2005
By Matt King

Gilroy - Perchlorate-contaminated groundwater in north Morgan Hill will be tested later this year to determine the source of pollution, but not by the company that city officials believe is responsible. The disputed plume will instead be tested by the Santa Clara Valley Water District as part of a deal between the district, the Regional Water Board and Olin Corp.

To the dismay of Morgan Hill City Manager Ed Tewes, the so-called northeast flow was not covered by a final cleanup order issued by the regional board to Olin earlier this month. Wednesday, Tewes reiterated his conviction that Olin should be ordered to clean the city's groundwater, but said he is pleased with the district's maneuver.

"Our basic feeling is that there's ample evidence to deem Olin responsible for the perchlorate in our municipal supply wells, but we want the regional board to finish its fact-finding process as quickly as possible," Tewes said. "Given they've taken that approach, this is a good thing."

Olin has accepted responsibility for the southern plume, which stretches about 10 miles south of Tennant Avenue in Morgan Hill and east of U.S. Highway 101, but the company contends that it can not be responsible for the northeast plume because the groundwater beneath its former road-flare factory flows south.

Perchlorate, a sodium compound shown to inhibit thyroid function in laboratory animals, was discovered in Morgan Hill two years ago. There are a number of other possible sources of the northeast flow. United Technology Corp. in north Morgan Hill tested rocket engines near Morgan Hill for more than 40 years. Rocket fuel is another known source of perchlorate, as are perchloric acid, used in etching Teflon, and a natural fertilizer that comes from Chile. Some have postulated that perchlorate is produced by lightning.

Sylvia Hamilton, chairwoman of the Perchlorate Community Advisory Group, a group of residents, county officials, water experts and scientists, called the agreement "fantastic."

"We've all been trying very hard to keep this out of the courts, but we've got to find the real source," she said. "We all have our opinions about where the perchlorate came from, but until you have solid data you're stuck. Olin has done a tremendous job over the last two years and we want to see that keep moving forward."

In December, the regional board ordered Olin to conduct further testing of the northeast flow, but Olin appealed the order and was to argue its case to the regional board in late March. The order has been stayed.

Thomas Mohr, water district geologist, said the stay was issued because the parties were at loggerheads in regard to the northeast flow. Morgan Hill officials believe the company needs to clean the water that serves nearly all of the city's population, and Olin believes it's been unjustly blamed for the contamination. If Olin lost an appeal of the order to the State Water Board, it would have the option of taking the board to court.

"Until these questions are resolved we're going to be deadlocked," Mohr said, "and at the moment, we felt like we were assured of going to court unless we found another way."

The district will test an area substantially larger than the northeast flow. Mohr said the exact parameters have not been mapped out, but they will likely extend as far north as Cochrane Avenue and east of U.S. 101. As part of the agreement, Olin will install a series of piezometer wells - able to track the direction water flows - around the site of its former road-flare factory, which may prove the company is not at fault.

Mohr said that the direction of the groundwater flow is usually given the most scientific weight, but is not necessarily indisputable.

"Ideally, you want to use multiple lines of evidence that everyone agrees on and will be convincing," Mohr said. "I don't know if that's achievable, but I think it's worth pursuing."

The regional board had ordered Olin to perform the kind of forensic testing that the water district will conduct. Forensic testing works by distinguishing different characteristics of chemicals. The road flares produced by Olin were made primarily of strontium nitrate and other chemicals that occurred in higher concentrations than perchlorate. Water contaminated with perchlorate from that site may also test positive for strontium nitrate and other chemicals with the same properties as those used in the flares, but Mohr cautioned that forensic testing is not a magic bullet.

"The trick of this kind of investigation is that you don't know anything until you get in there and take some measurements," Mohr said. "We have to confirm that possible sources are distinct enough. We have the potential to clarify where we stand, but there is no guarantee that this will answer all of our questions. We're optimistic, but it remains to be proven."

One unused road flare on the side of a highway is enough to contaminate more than 300,000 gallons of water with perchlorate to a level above 6 parts per billion, the public health goal in California, Mohr said

The district will apply for a federal grant to finance the testing, which should cost between \$100,000 and \$200,000. If the grant does not come through, the district will appeal to the regional board for funding. The district has not approached Olin to pay for the testing, but Mohr noted that if the district does not perform the tests, Olin can still be ordered to. Rick McClure, an Olin project manager, could not be reached for comment. Regional board officials also could not be reached for comment.

Mohr said he did not know how long the testing will take, but he expects to begin in eight weeks or so.

Since the perchlorate was discovered Olin has provided bottled water to the worst-affected residents in Morgan Hill and San Martin, and the company is in the process of installing well-head treatment systems on wells that test above 10 parts per billion.

Earlier this month, the regional board ordered Olin to present a final cleanup plan by spring 2006.



Matt King

Matt King covers Santa Clara County for The Dispatch. He can be reached at 847-7240 or mking@gilroydispatch.com.

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/12/2005 8:22:20 AM
Subject: Fwd: Perchlorate best practices

Opposition to Flare exemption.

>>> paulrcurry@earthlink.net 10/11/05 11:26 PM >>>

Mr. Nieto I have attached a letter and several articles for you review,
please feel to contact me for any clarification or additional
information.

Paul R. Curry and Associates

Government Relations

1127 11th Street, Suite 226
Sacramento, Ca 95814
(916) 441-0860

Dear Mr. Eduardo Nieto

October 10, 2005

I would like to thank you on behalf of my client PowerFlare for the opportunity to appear at the hearing on percholate best practices. It was evident at the hearing that the California Highway Patrol (CHP) and Sacramento County Sheriff's Department representative (Retired CHP Assistant Commissioner Al Cooper) were very concerned about making any changes to their current policy of using incendiary road flares. I believe there are facts that should be presented but were unable to be placed on the table during the hearing. For ease of reading, I will try and group the information by topic.

Law Enforcement exemption from the best practices protocols:

A blanket exemption from the best practices protocol will result in a continuation of the current use of incendiary road flares as has been the practice since the early 1920's. All electronic beacon manufacturers have had a very difficult time getting law enforcement agencies to test the effectiveness of their products in a real life application. The CHP with their stringent policies will only test a product that they have purchased and in the case of the PowerFlare they bought one unit for testing. During the test they ran over the beacon at approximately 75MPH and when it failed they summarily decided that it would not work for their application. Agencies across the United States and our own testing have not had similar results. They did however state in their letter that the PowerFlare could be used on surface streets. What was not factored in was that a fusee hit at 75MPH would have failed also and could have started a fire. The failure was caused by a design flaw (the battery came unsoldered from the circuit board) which was already prophylactically being addressed in the current version of the product. Their argument that it is too dangerous to retrieve and extinguish a road flare brings into question their own policy of extinguishing flares at the conclusion of an incident. With law enforcement being the number one user of incendiary flares containing percholate an exemption would be tantamount to non-regulation of this substance.

The requirement of looking and testing alternatives every 2 - 5 years:

The majority of law enforcement agencies consist of 30 or fewer officers; and these agencies do not have the ability to conduct detailed testing programs. The CHP is often looked to for their guidance on traffic issues due to the breadth of their resources. When a

product has been tested by the CHP or one of the major Sheriff's Departments, many smaller agencies will accept the results as pro forma results that they do not need to validate. A flawed test or incomplete test of the alternative product by one major agency would never make it in the market place. Any testing should require a real-world test as well as a controlled environment test. In the case of the Power Flare a CHP Captain tested the units in a real world environment and stated the following: "Our officers felt the PowerFlare units were very effective and ensured a safer working environment than regular flares." This was contrary to the results of testing one unit at the CHP training facility whose results became the official position of the CHP. The Captain who conducted the independent "real world" test could be subjected to an adverse action for making the statement which was counter to the official position of the patrol.

The CHP also stated that they were reluctant to be a lead agency in testing, yet they have taken the lead position in trying to get other law enforcement agencies to oppose the best practices protocols.

Any testing requirement should have as a component a requirement to fully disclose the means of the testing and the all conditions surrounding the test so that the results can be replicated. The regulation should also require that they state the verifiable efforts made to find an alternative.

The Santa Clara Valley Water District test was flawed:

The representative from Orion brought into question the test results of the Santa Clara Valley Water District and began his statement by saying that the pollution was caused by Olin leaving the hearing participants to believe that Orion had no part in the pollution in Santa Clara. I have attached a couple of news articles and an Orion company web page which stated that Olin was purchased by Orion in 1988, thus the disingenuous statement made by the Orion representative calls all of his statements into question. It is clear that Orion has a vested interest in not having any alternatives for the use of their product. Any reduction in the use of road flares would be a direct financial loss to Orion.

Conclusion:

Change is difficult for everyone even if the change is for their own good. In the case of road flares these have been the only items available for the dangerous work of road crews and law enforcement who must work around traffic daily. The noxious road flare is like a security blanket to a young child, but there comes a time when we all move forward and leave our blankets at home. Unless all users are subject to the best practices protocol the use of road flares will continue to grow as the traffic also increases. As someone who retired after 33 years of working for the San Bernardino County Sheriff's Department, I know the conditions that a signaling device must operate in. And as I stated at the hearing, the Power Flare electronic beacon cannot replace all uses for road flares, but it can reduce the need to use road flares in every instance. The Power Flare complies with U.S. DOT (FMCSA) 49 CFR 392.25, 393.95(g) and with its light motion makes it a highly visible and environmentally safe alternative to road flares.

In areas where there is already significant environmental damage due to percolate contamination, the unfettered continued use of road flares is irresponsible. Mandating the use of alternative signaling devices can help restore these damaged areas and prevent adding additional percolate to the ground water.

Thank you for the opportunity to comment. If I or my client can be of further assistance in providing information or testimony please, do not hesitate to give us a call.

Cordially,

Paul R. Curry
Paul R. Curry and Associates

ORION Marine Signal Products (formerly Olin Signal Products)



MARINE

HIGHWAY

WILDFIRE/
FORESTRY

About Orion Signals

[Click the browser's Back button to return to the previous page](#)

Corporate History

- Orion has been manufacturing automotive and railway flares (fusees) since the 1920s.
- In 1988 Orion purchased the automotive and marine signal divisions of Olin Corporation.
- Today, Orion is the world's largest manufacturer of emergency flares.

Business Description

Orion's sales are divided between commercial/bid business and consumer/retail business:

- The commercial/bid business involves the sale of automotive and railway emergency flares, railway torpedos (used for signaling other trains) and backfire torches (used in forest fire management). Orion's customers include railroads, state/federal agencies (e.g., police, highway, forestry and fire departments) and commercial concerns (e.g., barricade companies, utilities, etc).
- Orion's consumer/retail business involves the sale of automotive emergency flares, Coast Guard approved marine signal devices, first aid kits, wilderness signal & survival products, chemical lights and Chimfex (a chimney fire suppressant) through direct retail accounts and two-step distribution.

PSG Perchlorate Study Group

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/6/2005 5:00:51 PM
Subject: Fwd: FW: Final PSG DTSC BMP Comments

Check if duplicate of previous email

>>> "Christy Hessler" <CHessler@ka-pow.com> 10/06/05 3:53 PM >>>
I am transmitting Perchlorate Study Group comments on DTSC's perchlorate
BMP regulation on Jeff Sickenger's behalf.

Thank you

Christy Hessler
Kahl Pownall Companies LLC
1115 11th Street, Suite 100
Sacramento, CA 95814
916/448-2162 - Phone
916/448-4923 - Fax
chessler@ka-pow.com

SCS Shasta County Office of the Sheriff

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:39:26 AM
Subject: Fwd: FW: Perchlorate BMP

DODs

>>> "Faryan, Marykay CIV N05" <marykay.faryan@navy.mil> 10/07/05 4:07 PM >>>

Peggy/Ed - Thanks for much for the opportunity to work these issues with you.
Attached please find DODREC 9 comments on the developing perchlorate BMP reg.
We will fed ex a hard copy of the signed document and supporting documents as well. Thank you for your time. MKF

Mary Kay Faryan
DOD Regional Environmental Coordinator Counsel
937 N. Harbor Drive (Suite #100)
SD, CA 92132
marykay.faryan@navy.mil
work 619-532-4301
fax #1426
cell 619-954-8992

> -----Original Message-----

> From: Espejo, Romeo CIV N05
> Sent: Friday, October 07, 2005 12:29
> To: Faryan, Marykay CIV N05
> Subject: Perchlorate BMP

>

> > <<Attachment 1.pdf>> > > <<Attachment 2.pdf>> > > <<Attachment 3.pdf>>
> > <<Attachment 4.pdf>> > > <<Untitled>>

From: "Raines, Richard H CIV NFECSSW" <richard.h.raines@navy.mil>
To: "Faryan, Marykay CIV N05" <marykay.faryan@navy.mil>
Date: 10/7/2005 4:03:57 PM

SDI Special Devices, Incorporated

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/7/2005 8:07:10 AM
Subject: Fwd: Comments on the Draft Perchlorate BMP Regulations

Good comments. Not certain if we can go so far as say as no possible environmental impact. However, the residues from a used initiator may fall under the combustion residual exemption.

>>> "Bill Welsh" <Bill.Welsh@specialdevices.com> 10/06/05 7:23 PM >>>
Hello Ed -

The attached file contains SDI's comments on the September 16, 2005 draft of the Perchlorate BMPs. This information is provided in addition to the information provided in my August 31, 2005 submittal.

Please feel free to call me if you have questions, need clarification, or would like to discuss further. I would like to thank you in advance for your prompt and considerate review of these comments.

Bill Welsh
Special Devices, Incorporated
14370 White Sage Road
Moorpark, CA 93021
Phone (805) 553-1295
Fax (805) 553-1254

> > <<PDF_From.pdf>>
>
>

**SDMA Sedgwick Detert, Moran & Arnold
(Orion Safety Products)**

October 7, 2005

VIA HAND DELIVERY

Edward Nieto
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Re: Perchlorate Best Management Practices Formal Comments and Proposed Regulations
Our File No.: 2553-109859

Dear Edward:

On behalf of Orion Safety Products, we are hereby submitting formal comments on the Proposed BMP Regulations and our proposed alternative to the "straw man" proposal.

If you have any questions or comments about this submittal, just let me know. We appreciate the opportunity to work with you in this process.

Best regards,



Keith Casto
Sedgwick, Detert, Moran & Arnold LLP

REK/rek

SF/1291456v1

ORION SAFETY PRODUCTS
Formal Comments Submitted to the California Department of Toxic Substances Control
on the Proposed Best Management Practices Regulations for Perchlorate
(H&S Code §§ 25210.5 *et seq.*)

October 7, 2005

Management of Perchlorate Materials

Orion Safety Products (“Orion”) is the nation’s largest supplier of safety flares. It has built an excellent reputation by manufacturing a highly effective product that outperforms every alternative on the market. Orion’s largest customer in the State of California is the California Highway Patrol (“CHP”). To the extent of any inconsistency between Orion’s Formal Comments or Proposed Best Management Practices and those of the CHP, Orion defers to those submitted by the CHP.

I. Applicability

Orion requests that the DTSC carve out an exemption in DTSC’s proposed “straw man” Best Management Practices (“BMP”) Title 22 C.C.R. Section 67384.2 for personnel conducting public safety activities and for waste derived from public safety activities.

A definition of the term “public safety activity,” defined as an activity intended to protect people or property, including, but not limited to, law enforcement services, fire protection and suppression, emergency medical care, tow operations, emergency services, public utility service and repair, homeland security and highway and road maintenance and repair, should be added to proposed BMP Section 67384.3.

II. Special Management of Perchlorate Materials

The requirements and restrictions on flare use as set forth in proposed BMP Section 67384.9 may endanger personnel conducting public safety activities and the public. Safety flares emit a high intensity light, they have a self contained ignition device and are capable of being immersed in water without readily impairing the efficiency of the flare¹. No suitable alternatives exist for perchlorate containing safety flares. Studies prove that using a larger number of safety flares at an accident site is more likely to create a secure area and prevent further harm to responding personnel and to the public². Equally as important, agencies conducting public safety activities do not want and may not accept BMP that interfere with the safety of their personnel and the public.

¹ Flares themselves are water resistant. See Tab 4 entitled “Water Resistant Packaging” in Orion’s Comments Binder submitted to the DTSC.

² See “Study Regarding Emergency Road Flare Effectiveness in Enhancing the ‘Safety Zone,’” prepared by the Pennsylvania Transportation Institute; “Study of Safety-Related Devices” prepared by the National Highway Traffic Safety Administration and “Intensity Comparison Tests” conducted by Imanna Laboratories, all located under Tab 1 of the Comments Binder.

Special management practices in the DTSC's proposed BMP Section 67384.9 should be implemented in a manner that does not interfere with public safety activities and endanger the lives of individuals involved in such activities. Proposed BMP Section 67384.9 requires agencies performing public safety activities to conduct management practices that are impractical and potentially dangerous. For instance, it is not possible to replace the cap of a flare after it has been ignited; flares cannot be extinguished by placing them in water; law enforcement officers should not be required to place extinguished flares in their vehicles because of the risk of fire if the flare is not completely extinguished; and a requirement limiting the use of flares in standing water would prevent their use during storms and floods, conditions in which they are most effective. In addition, waste derived from completely and partially burned flares need not be treated as a hazardous waste because it does not exhibit any of the characteristics of a defined hazardous waste³.

Orion requests that, as an alternative to an absolute exemption for public safety activities, the language in Orion's Proposed BMP Regulations for Perchlorate Section 67384.9 be substituted in place of DTSC's proposed BMP for the same section.

III. Discharge/ Disposal Restrictions for Perchlorate Materials

Flares, in their partially or completely combusted form, have virtually no impact on the environment. The recent study prepared for the Santa Clara Valley Water District claiming that combusted flares are, indeed, deleterious to the environment is unscientific and fatally flawed in its experimental method, interpretation of results and quality of the report⁴.

Furthermore, partially and completely combusted flares do not exhibit any of the characteristics of a defined hazardous waste. First, neither perchlorate nor any other constituent of safety flares are listed hazardous wastes. Second, partially and completely combusted flares are not ignitable⁵. Third, the existence of strontium nitrate in partially burned flares poses no danger of toxicity, as defined by the U.S. Occupational Safety and Health Administration, when used by personnel nor does strontium nitrate pose a danger to ground water⁶. Finally, fusee powder is not toxic if ingested⁷.

Therefore, Orion requests that nothing in these regulations should suggest that flares be managed or disposed of as a hazardous waste.

³ See Declaration and supporting documents prepared by John Conkling located under Tab 3 of the Comments Binder and the Strontium Nitrate Toxicity Study and Powder Toxicity Study located under Tab 5 of the Comments Binder.

⁴ See "Critical Evaluation of Santa Clara Valley Water District 'Flare in the Barrel' Perchlorate Study" located under Tab 2 of the Comments Binder.

⁵ See, Declaration and supporting documents prepared by John Conkling located under Tab 3 of the Comments Binder.

⁶ See Paper and supporting documents from John Conkling located under Tab 5 of the Comments Binder.

⁷ See Toxicity Study located under Tab 5 of the Comments Binder.

IV. Conclusion

Orion requests that the use of flares in public safety activities be exempt from the DTSC's proposed BMP. In the alternative, Orion respectfully requests that the DTSC implement the language in Orion's Proposed BMP Regulations for Perchlorate (See §§ 67384.9 through 67384.XX) to require reasonably practicable BMP for personnel conducting public safety activities.

ORION SAFETY PRODUCTS
Proposed Best Management Practices Regulations for Perchlorate
Submitted to the California Department of Toxic Substances Control
(H&S Code §§ 25210.5 et seq.)

October 7, 2005

Chapter 33. Management of Perchlorate Materials

Article 1. General

§ 67384.2 Applicability

(a) As of July 1, 2006, the requirements of this chapter shall apply to all persons managing perchlorate materials as described in section 67384.3, except persons conducting public safety activities¹ and those listed in subsection (b) of this section.

(b) The requirements of this chapter do not apply to the following perchlorate materials:

1. Perchlorate materials managed as a hazardous waste in compliance with all applicable requirements of California hazardous waste law;
2. Contaminated media regulated under an order pursuant to Health and Safety Code (HSC) chapter 6.5 or chapter 6.8, Water Code;
3. Perchlorate materials containing less than six (6) parts per billion (ppb) of perchlorate;
4. Consumer goods manufactured in California prior to, but no later than December 31, 2006, and consumer goods transported into California prior to, but no later than to December 31, 2006;
5. Food and pharmaceuticals; and
6. Combustion residuals of pyrotechnic perchlorate materials.²

¹ The definition of "public safety activity" is located in § 67384.3.

² Definitions need to be created for "combustion residuals" and "pyrotechnic perchlorate materials." See § 67384.3.

§ 67384.3 Definitions

“Water-resistant packaging”³

“Pyrotechnic residuals” (ashes)⁴

The term “public safety activity” means any activity intended to protect people or property, including, but not limited to, law enforcement services, fire protection and suppression, emergency medical care, tow operations, emergency services, public utility service and repair, homeland security and highway and road maintenance and repair.

The term “combustion residuals” means the ash and other physical material that remains after the perchlorate material is substantially consumed.

The term “pyrotechnic perchlorate materials” is defined as a pyrotechnic composition containing perchlorate, which, by the agency of fire, produce an audible, visual, mechanical or thermal effect designed and intended to be useful for industrial, agricultural, personal safety, or educational purposes.

The term “highway” as used herein shall be the definition set forth in California Vehicle Code section 360, “‘highway’ is a way or place of whatever nature, publicly maintained and open to the use of the public for purposes of vehicular travel. Highway includes street.”

³ This definition should include products containing a water resistant coating, such as flares, as explained in Tab 4 of the Comments Binder.

⁴ This should be the same or consistent with “combustion residuals” from “pyrotechnic perchlorate materials.”

§ 67384.9 Special Management for Perchlorate Materials

(a) Road safety flares⁵ should be used in a manner that minimizes releases of perchlorate to the environment. The following practices should be implemented to the extent practical without impeding immediate public safety considerations:

1. Flares should be allowed to burn completely;
2. Manual extinguishing of flares should be done by tapping the burning end, but only if safe to do so;
3. Flares used in an emergency incident should be limited in number and duration necessary to ensure public safety during that incident;
4. Personnel that routinely use flares in the normal course of their employment should receive instruction on the perchlorate Best Management Practice requirements of this section.

(b) Marine safety flares should be used in a manner that minimizes releases of perchlorate to the environment.

(c) The solid residuals of display fireworks measuring greater than a centimeter within the expected fallout area shall be collected the day after the firework display.

⁵ Perchlorate containing road safety flares are the safest to use compared to alternate products, as explained in Tab 1 of the Comments Binder.

§ 67384.9a Special Management for Perchlorate Spills

(a) For spills of non-hazardous perchlorate materials to the environment, a handler of perchlorate materials:

1. Shall immediately take action to stop and contain all releases of perchlorate material;
2. Shall determine whether any material resulting from the release is hazardous waste, and if so, shall manage the hazardous waste in compliance with all applicable requirements of this division⁶. The handler is considered the generator of the material resulting from the release, and shall manage it in compliance with Chapter 12;
3. Shall collect to the extent practical any material resulting from the release;
4. Shall decontaminate the spill area; and
5. Should prevent or minimize releases to storm sewers.

(b) This section shall not apply to any activities already covered under § 67384.9⁷.

⁶ Partially and fully combusted flares are not hazardous wastes, as provided in Orion's Formal Comments and Tabs 3 and 5 of the Comments Binder.

⁷ § 67384.9a should exclude § 67384.9, otherwise it functions as a "catch all" category.

§ 67384.10 Discharge/Disposal Restrictions for perchlorate materials

- (a) Solid non-hazardous perchlorate containing waste shall be disposed of in either a hazardous waste landfill, or in a composite-lined portion of a non-hazardous waste landfill that meets all requirements applicable to disposal of municipal solid waste in California after October 9, 1993.
- (b) Non-hazardous liquid perchlorate containing waste shall only be discharged using one of the following methods:
1. To a publicly owned treatment works (POTW) in accordance with all applicable industrial waste discharge requirements issued by the agency operating the POTW. The facility owner or operator shall inform the agency operating the POTW of the time, volume, content, characteristics and point of the discharge.
 2. Require that non-hazardous liquid perchlorate wastewater be in accordance with waste discharge requirements issued by a Regional Water Quality Control Board; or a National Pollutant Discharge Elimination System (NPDES) permit.
- (c) Perchlorate containing materials classified as household waste shall be exempt from the discharge/ disposal requirements of this section.
- (d) Solid non-hazardous perchlorate containing waste derived from public safety activities shall be exempt from the discharge/ disposal requirements of this section.

ALTERNATIVES

§ 67384.XX Perchlorate Restrictions

- (a) On or before January 1, 2008 and every 5 years thereafter, a business that uses perchlorate-containing fertilizer, road safety flares, commercial explosives, or commercial blasting agents shall submit to the Department a Product Alternatives report which must include both a product substitution analysis; and a description of pollution prevention measures taken in the previous calendar year.
- (b) On or before January 1, 2008 and every 5 years thereafter, a business that uses perchlorate-containing display fireworks, pyrotechnics, or solid rocket motor in amounts greater than 100 pounds in one month shall submit to the Department, environmental monitoring results of soil and water within the fallout zone. At minimum, sampling should be done the day after such use, but not more than twice a year and shall include at least six (6) samples.
- (c) Pursuant to HSC section 25210.7, a business may not manage perchlorate materials unless the management complies with the best management practices specified in the subsections (a) and (b) above.
- (d) Notwithstanding subsection (a), a local, state or federal agency involved in public safety activities should submit to the Department any road safety flare product substitution analysis it has conducted.



SHASTA COUNTY

Office of the Sheriff



October 7, 2005

Jim Pope
SHERIFF-CORONER

Larry Schaller
UNDERSHERIFF

Mr. Ed Nieto, Perchlorate Workshop Comments
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

Dear Mr. Nieto:

I am writing to comment on the Emergency Rule Making Proposal your department has prepared regarding the Best Management Practices for products containing Perchlorate as required by AB 826 (statutes of 2003, Chapter 608). I am particularly concerned about how these regulations will impact the Shasta County Sheriff's Office in its ability to use road flares and the cost associated with the use and storage of road flares. The men and women of the Sheriff's Office work closely with other public and law enforcement agencies in the Shasta County area to close traffic lanes, divert traffic around hazardous locations, and provide protection to emergency personnel on critical incident scenes. Given the variety of roadway and weather conditions found in Shasta County, the road flare has been the most common and cost-effective tool utilized by the Sheriff's Office and many other public safety agencies. Any restrictions on the use of road flares would place our officers and other public safety personnel, as well as the motoring public, at risk for serious injury or death.

Sheriff's deputies receive initial training regarding the use, ignition and extinguishing of road flares at the basic law enforcement academies accredited by the Commission on Peace Officer Standards and Training (P.O.S.T.). P.O.S.T. has a set curriculum which assures that all law enforcement officers receive the same training on road flare use. Additionally, our deputies receive additional training during their Field Training Program from senior officers who have been specifically trained to teach other officers the skills necessary for patrol operations and handling of road flares.

The proposed regulations, specifically Section 67384.9, Special Management for Perchlorate materials, indicate that the best practices listed are to be implemented to the *"...extent practical without impeding immediate safety considerations."* Specific training about Perchlorate and its hazards could be incorporated into initial training at basic police academies, but that training would need to be approved and coordinated through P.O.S.T.

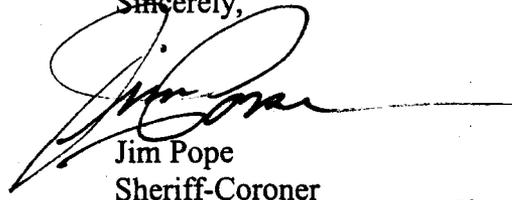
I have attached a letter from the Department of California Highway Patrol Commissioner Mike Brown (file number: 1.A9293.051.05-0959). Mr. Brown's letter addresses the concerns of the

proposed regulations in great detail. I am in concurrence with the letter and his responses to the proposed regulations. Some of the proposed regulations increase the risk of injury to officers and emergency personnel at the scene of a traffic collision or other critical incidents directing traffic. Additionally, parts of the proposed regulations may prohibit sheriff's personnel from transporting road flares since it may be considered transportation or storage of hazardous waste materials in their vehicles. I believe that these regulations and restrictions upon the use of road flares may end up burdening my office and Shasta County with costly expenditures from private vendors to transport and dispose of road flares containing Perchlorate.

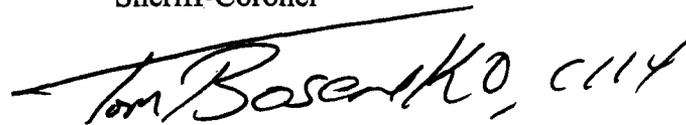
I am opposed to proposed regulations that may increase the risk of danger to my personnel and unnecessarily increase the financial burden placed upon the Shasta County Sheriff's Office as a result of these regulations. If training is developed by P.O.S.T. regarding the potential risk of Perchlorate contamination, the Shasta County Sheriff's Office will provide that training to its officers and staff. I am sure that other law enforcement professionals throughout the State of California have similar concerns regarding these proposed regulations.

If you have any further questions or requests, please contact me or Captain Tom Bosenko of our Patrol Division at (530) 245-6068.

Sincerely,



Jim Pope
Sheriff-Coroner



Tom Bosenko, Captain
Patrol Division

JP:TB:slb

TFI The Fertilizer Institute

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/7/2005 1:00:59 PM
Subject: Fwd: The Fertilizer Institute's Comments on Assembly Bill No. 826, Perchlorate BMP Draft Language, Chapte

I guess Monday's conference call was all they needed.

>>> "Bill Herz" <WCHerz@tfi.org> 10/07/05 12:41 PM >>>
Dear Mr. Nieto:

Please find attached The Fertilizer Institute's Comments on Assembly Bill No. 826, Perchlorate BMP Draft Language, Chapter 33. Should you have any questions about these comments, do not hesitate to contact me by e-mail at wcherz@tfi.org <<mailto:wcherz@tfi.org>> or by telephone at (202) 515-2706.

William C. Herz, MPH
Director of Scientific Programs
The Fertilizer Institute
820 First Street NE, Union Ctr Plaza Ste 430
Washington, DC 20002

dd (202) 515-2706
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Main (202) 962-0490
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WBR1 Weston Benshoof Rochefort Ruvalcava & MacCuish
8/31/05

WBR2 Weston Benshoof Rochefort Ruvalcava & MacCuish
10/7/05

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/7/2005 12:19:39 PM
Subject: Fwd: Perchlorate Best Management Practices

Checked and opened with out a problem.

>>> "Dana Camacho" <DCAMACHO@wbcounsel.com> 10/07/05 12:14 PM >>>
Mr. Nieto:

Attached please find comments submitted by Sharon Rubalcava on behalf of the Motion Picture Association of America with regard to the above-referenced matter. A hard copy of this letter will follow by U.S. mail.

If you have difficulty opening the attachment, please contact me immediately.

Thank you,

Dana Camacho
Assistant to Sharon Rubalcava
Weston Benshoof Rochefort
Rubalcava & MacCuish LLP
333 S. Hope Street, 16th Floor
Los Angeles, CA 90071
Direct: (213) 576-1125
Fax: (213) 576-1100

For more information about Weston Benshoof, please visit our website at www.wbcounsel.com.

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WPHA Western Plant Health Association



Deleted: October 7, 2005

October 24, 2005

VIA ELECTRONIC DELIVERY

Mr. Eduardo Nieto
Department of Toxic Substances Control
Hazardous Waste Management Program
Regulatory and Program Development Division
California Environmental Protection Agency
PO Box 806
Sacramento, CA 95812-0806

Dear Mr. Nieto:

On behalf of the Western Plant Health Association (WPHA), I thank you for this opportunity to comment on your draft language for proposed options for developing perchlorate best management practices. WPHA represents the manufacturers of fertilizers in California, as well as the agricultural retailers who provide these products to California's farmers. Our comments are in addition to the comments forwarded by The Fertilizer Institute (TFI), whose comments we support. As many of our comments are reflected by that document I will reference that document as the "TFI/WPHA Comments" where appropriate, rather than completely restating them in their entirety.

WPHA has been working with TFI and the California Department of Food & Agriculture (CDFA) since 1999 when the "Susarla Report" which alleged that fertilizers may be a source for perchlorate contamination was released. Since that time, the "Susarla Report" has been found not to have any standing in its allegations, and fertilizers have been clearly determined not to have any role in the problem of perchlorate contamination. However, our industry as well as CDFA has continued to work diligently through extensive testing and development of analytical methods to demonstrate the safety of fertilizer products.

Agricultural products and practices should be exempt from Department of Toxic Substance Oversight

As stated in the "TFI/WPHA Comments" what trace levels of perchlorate that have been found in fertilizers have been demonstrated to be from naturally occurring organic sources within those products. This means as stated in the "TFI/WPHA Comments" that fertilizers are neither environmental hazards nor hazardous wastes. As such, we believe it is inappropriate for DTSC to be developing regulations for the management of these products. The regulatory authority for the development and enforcement of fertilizer regulations and agricultural practices clearly lies within CDFA. WPHA is very concerned that these proposals were developed without the involvement of CDFA. The agricultural community has met with Secretary Lloyd on an on-going basis for over a year, receiving commitments from the Cal-EPA



administration establishing that when regulations are being considered or promulgated that would impact agriculture, CDFA would be a full partner in the process from the beginning. The failure to consult and involve CDFA has resulted in proposals that lack understanding of agricultural practices and products, and would cost both the providers of products as well as farmers prohibitive and unnecessary costs.

WPHA believes that DTSC should, as proposed in your perchlorate best management practices proposal “exempt agricultural uses when applied to land (contaminated water, fertilizers, etc), because as outlined in the “TFI/WPHA Comments” perchlorates within the agricultural system, do not represent a significant source of perchlorate to the environment.

DTSC should also exempt “agricultural uses” from DTSC regulation as fertilizers are already under the authority of CDFA. The regulation of crop inputs should continue to rest with CDFA, as CDFA has the necessary technical and analytical expertise to make the appropriate assessments of risks to the agricultural system. Additionally, CDFA can effectively engage the agricultural community in any needed assessments of agricultural best management practices. DTSC failure to engage CDFA on an ongoing basis on these series of proposals has resulted in an apparent lack of agriculturally focused data which would have demonstrated no need for DTSC to be dedicating resources and time in this area.

Again, we recommend that DTSC “exempt agricultural uses” from your proposed regulations for the technical and scientific reasons outlined in the “TFI/WPHA Comments”, and because the regulatory authority lies with CDFA. CDFA should be responsible for any recommendations that should be developed.

We thank you for your consideration of our comments. If you have any questions regarding this document, or our positions stated within the joint TFI and WPHA comments, please contact Renee Pinel @ (916) 446-3316.

Sincerely,

Renee Pinel
Director of Policy and Legislation

From: Eduardo Nieto
To: Evelia Rodriguez; William Beckman
Date: 10/11/2005 9:35:02 AM
Subject: Fwd: Perchlorate Best Management

>>> "Renee Pinel" <reneep@healthyplants.org> 10/07/05 2:56 PM >>>
Please see attached comments.

Thank you,

Renee Pinel