INVITATION TO ORGANIZATIONS TO CO-SIGN

Public Comments to Louisiana DEQ:
END Open Air Burning and Detonation
of Solid and Hazardous Waste at Clean Harbors Colfax, LA
Organizational sign-on deadline is March 19, 2020

March 19, 2020

Public Participation Group
P.O. Box 4313
Baton Rouge, LA 70821-4313
Email: deq.publicnotices@la.gov

SUBMITTED BY ELECTRONIC MAIL

Regarding:
AI 32096
Activity PER20170002
Permit Number LAD 981 055 791 – RN–OP-1
Subject INTENT TO DENY HAZARDOUS WASTE OPERATING PERMIT RENEWAL APPLICATION

Dear Louisiana Department of Environmental Quality,

By this letter, the undersigned ___ organizations voice our **support** for the Department's intent to deny a Hazardous Waste Operating Permit Renewal Application for Clean Harbors Colfax (Colfax) and **object** to the relentless open air burning and detonation of hazardous and mixed wastes at this site based on the availability of safer advanced alternatives, the excessive risk to human health and the environment, and noncompliance with federal and state law requiring the implementation of available safer advanced treatment methods.

By definition, open burning and detonation result in the uncontrolled release of toxic pollutants to the environment. These toxic emissions endanger public health by contaminating air, groundwater and soils near these operations. Onsite men and women are often the most exposed to these toxic pollutants, along with nearby communities. Across the country, hundreds of communities and thousands of military personnel have felt the adverse effects of these toxic pollutants.

According to documents submitted by Colfax, open burning will result in the uncontrolled release of persistent toxic pollutants such as **perchlorate** to the surrounding environment. As the State is aware, perchlorate is highly soluble in water, and relatively stable and mobile in surface and subsurface aqueous systems. As a result, perchlorate plumes in groundwater can be extensive (ITRC, 2005). For example, the perchlorate plume at a former safety flare manufacturing site (the Olin Flare Facility) in Morgan Hill, California, extended 10 miles. Moreover, perchlorate released directly to the atmosphere is expected to readily settle through wet or dry deposition (ATSDR, 2008).

The thyroid gland is the primary target of perchlorate toxicity in humans. Thyroid hormones play an important role in regulating metabolism and are **critical for normal growth and development in fetuses, infants and young children**. Perchlorate can interfere with iodide uptake into the thyroid gland at high enough exposures, disrupting the functions of the thyroid and potentially leading to a reduction in the production of thyroid hormones (ATSDR, 2008).

Like perchlorate, **lead emissions** pose a serious health risk particularly to children. Even at lower levels of exposure, lead is now known to produce a spectrum of injury across multiple body systems. In particular lead can affect children's brain development resulting in reduced intelligence quotient, behavioral changes such as reduced attention span and increased antisocial behavior, and reduced educational attainment. Lead exposure also causes anemia, hypertension, renal impairment, immunotoxicity and toxicity to the reproductive organs. The neurological and behavioral effects of lead are believed to be irreversible. **In fact, there is no known safe blood lead concentration**. (WHO, 2018).

Open air burning at Colfax includes the addition of dunnage such as wood or other organic waste and diesel fuel. Smoke is made up of a complex mixture of gases and fine, microscopic particles produced when wood and other organic matter burn. The biggest health threat from wood smoke comes from **fine particles** (particulate matter). They are small enough to enter the lungs where they can cause bronchitis, pneumonia, asthma, or other serious respiratory diseases. Fine particles can also aggravate chronic heart and lung diseases, and are linked to premature deaths in people with these chronic conditions. In addition to fine particles, open burning of both wood and diesel fuel may also be expected to release **dioxins.**

But here is the good news…

In the past 30 years, alternatives to the incineration of hazardous waste have emerged due to the work of communities, EPA, and the Department of Defense (DOD). These technologies are being used by the DOD to destroy energetics and chemical warfare agents and could be readily applied to conventional munitions and other types of hazardous waste.

Examples of these technologies include Gas Phase Chemical Reduction which uses hydrogen and heat to break down toxic chemicals into their basic components. Because hydrogen is used for the reduction reaction and no oxygen is present, no harmful chlorinated byproducts can be formed. This technology was used to destroy PCBs and obsolete pesticides in Australia. It was specifically developed for the Assembled Chemicals Weapons Destruction program.

Supercritical Water Oxidation uses the unique forces of supercritical fluids to breakdown the chemical bonds which form munitions, propellants, and energetics. Supercritical Water Oxidation uses super

pressurized, heated water to tear apart the chemical bonds in toxic organic compounds, breaking them down into basic components such as water, carbon dioxide, and nitrogen gas. The lower temperature (compared to combustion) and the high pressure of the water keep harmful byproducts from being formed.

There are several types of detonation chambers that can be used to safely destroy waste munitions. These detonation chambers are much safer than open burning or incineration because they hold and test the gases to ensure all the toxic components have been destroyed before releasing them. One kind of detonation chamber, the DAVINCH chamber, detonates explosives in a vacuum. Without the presence of oxygen, harmful products of incomplete combustion cannot be formed.

Moreover, over the past 15 years the Department of Defense Explosives Safety Board has certified a number of technologies as safe for the destruction of hazardous wastes which are explosive. Those technologies are now in use by the Department of Defense and the private sector for the destruction of explosive hazardous waste.

Not only do safer advanced technologies exist, their implementation is required by federal law. The operating language on open burning/open detonation of hazardous wastes which are waste explosives is contained in Title 40, Section 266.382. "Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives. Waste explosives include waste which has the potential to detonate and bulk military propellants which cannot safely be disposed of **through other modes of treatment**." (Emphasis added.)

In fact, the State of **Louisiana** has the same mandate. Louisiana Environmental Regulatory Code concerning the control of air pollution from outdoor burning [LAC 33:III.1109 (9)(a)] specifies that outdoor burning of explosives, pyrophoric, or any other materials may only be exempted "**where there is no practicable or safe method of disposal.**" (Emphasis added.)

Further, Louisiana Environmental Regulatory Code (LAC33 part V 4533) prohibits the open burning of hazardous waste except for the open burning and detonation of waste explosives which have the "potential to detonate and bulk military propellants **which cannot safely be disposed of through other modes of treatment**." (Emphasis added.)

Therefore, we urge you to immediately end the indefensible practice of continued open air burning and detonation of hazardous waste at Colfax and in Louisiana in favor of safer non-thermal alternatives.

Sincerely,

Citizens for Safe Water Around Badger (CSWAB)
Central Louisiana Coalition for a Clean & Healthy Environment
California Communities Against Toxics
California Safe Schools
Citizen Action New Mexico
Concerned Citizens for Nuclear Safety
Crawford Stewardship Project
Earth Action, Inc.
Environmentalists Against War
Greenaction for Health and Environmental Justice
Kentucky Environmental Foundation
RootsAction.org
Taos Environmental Film Festival

Tewa Women United
Valley Watch, Inc
Veterans for Common Sense
Veterans For Peace
VIDAS VIEQUENSES VA LEN
Volunteers for Environmental Health and Justice
World BEYOND War

MORE ORGANIZATIONS WILL BE ADDED HERE using Google Forms:
https://docs.google.com/forms/u/0/d/e/1FAIpQLSedYzZEVaVzXEKT-U6-n6L3ty-o6ikstjL1AjyzmS-x6iYetw/formResponse

References:

- Agency for Toxic Substances and Disease Registry (ATSDR), 2008. "Toxicological Profile for Perchlorates." www.atsdr.cdc.gov/toxprofiles/tp162.pdf
- Interstate Technology Regulatory Council (ITRC), 2005. "Perchlorate: Overview of Issues, Status, and Remedial Options." www.itrcweb.org/GuidanceDocuments/PERC-1.pdf
- Louisiana Department of Environmental Quality (LDEQ), Air Permits Division, Department of Environmental Quality, 2019 update. https://deq.louisiana.gov/assets/docs/About_LDEQ/enviroschool/BurningPresentation_2019_Update.pdf
- World Health Organization (WHO), 2018. "Lead Poisoning and Health." http://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health