REDACTED VERSION

Crossland, Ronnie

From: Brown, Cynthia
Sent: Friday, March 13, 2015 8:39 AM
To: Crossland, Ronnie
Subject: FW: Comments on OB /OD at the Explo Inc Site in Camp Minden
Attachments: Edwards_AFB_OB-OD_comments.docx

-----Original Message-----
From: (b) (6) [mailto: (b) (6)
Sent: Monday, December 08, 2014 4:51 PM
To: Brown, Cynthia
Subject: Comments on OB /OD at the Explo Inc Site in Camp Minden

Dear Ms. Brown,

Attached please find comments recently filed on an OB/OD proposed permit in California. Alternatives to the OB/OD of munitions clearly exist and are cost effective since they are being used at other facilities across the country.

We are requesting that the EPA look at these other technologies as an
alternative to the open burning of millions of pounds of munitions.
We are very concerned about all of the air pollution that would be going into the air from this proposal to open burn all these munitions, and the dire public health impacts that that pollution would create.

It is unclear to me why a health risk assessment is not required of this action, since if this action were taking place under RCRA a health risk assessment would be required before a permit could be issued.
Section 20 of the AOC clearly states that the AOC does not intend to forstall the application of all ARARs to the action. Given this statement in the AOC, can you please tell us what ARARs the agency has identified as applicable to this action and when the public will get the opportunity to comment on those identified ARARS. Normally, technology selection would take place after a feasibility study was prepared under CERCLA, but I can find no record of such a study on Region 6 EPA's website. As well, public involvement in the technology selection phase of the remedy is required both under CERCLA and RCRA.

I want to make sure that EPA is aware of the fact that there are numerous technologies which have been reviewed both by the National Academy of Sciences and the Explosives Safety Board, including the Controlled Detonation Chamber, Super Critical Water Oxidation, and Hydrolysis. The Army currently ownes a T30 Controlled Detonation Chamber, which I believe is housed at Edgewood. The Army presumably could field such a technology to the site for use on these munitions, significantly reducing the emissions to the air from this proposed action.

Since the Army already ownes one detonation chamber and could contract for more, and the manpower and the ignition source would be the same, it would seem a cost comparison would show that the use of the chambers would not been much more expensive than OB/OD and the benefit is that the chambers can treat the waste 24 hours per day every day of the year since rain and wind do not preclude their use as the burn trays do.

We are also requesting that EPA place all the relevant documents about this action on its Region 6 homepage so that members of the public can discern what is happening and when.

Thank you for your kind response to these comments and your concerns for the health and safety of the public.

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Cordially,

(b) (6)
Sierra Club
National Air Team
Rosamond, CA
(b) (6)
(b) (6)

Desert Citizens Against Pollutioin

Post Office Box 845 * Rosamond, CA 93560

(b) (6) [redacted]

Sam Coe, Project Manager

Department of Toxic Substance Control

8800 Cal Center Drive

Sacramento, CA 95826

September 18, 2014

Re: Comments on the DEIR for Edwards Air Force Base OB/OD facility

Dear Mr. Coe,

Thank you for the opportunity to comment on the Draft Environmental Impact Report on the proposed Edwards Air Force Base EAFB Open Burn/Open Detonation OB/OD facility. I have a number of observations and comments on this DEIR.

Standing:

First, I am a resident of Rosamond, California and Desert Citizens Against Pollution (DCAP) was first organized to oppose the construction of a hazardous waste landfill not but approximately 5 miles from the site of this proposed OB/OD facility. A number of our original members live in the town of Hi Vista which is the nearest community to this proposed facility. DCAP was incorporated in 1985 and has been active in protecting the desert areas of the Southwest United States since that time. We have worked on a number of sources of pollution, including power plants, proposed hazardous waste landfills, nuclear waste landfills, solid waste landfills, the burning of hazardous waste in cement kilns, and OB/OD of munitions and chemical warfare issues nationally, as well as implementing the air toxics provisions of the Clean Air Act among many other things.

Some of our members live in Rosamond, California which, according to the information presented in the DEIR, is directly downwind of the proposed OB/OD facility. The DEIR states

that the wind is from the SW to the West at the proposed site, Rosamond is to the west of the base.

Our members were the group of residents initially very concerned about the environmental impacts of OB/OD activities on the environment in California and we worked with communities in the Northeastern area of California to close the largest OB/OD facility in the United States at that time, the Sierra Army Depot. At the Sierra Army Depot, local residents became contaminated with both the energetics and the metals from the OB/OD activities there. The communities surrounding the Depot were adversely affected by the activities and working with their elected representatives, refused to grant the Depot the Title V permit necessary to operate the facility. Since the waste stream still existed, the residents there worked with Senator Harry Reid to establish a special hazardous waste treatment facility at the Hawthorne Army Depot in Nevada to destroy the munitions that were formerly headed to the Sierra Army Depot. This facility still operates and is permitted to destroy munitions by the state of Nevada and the United States Environmental Protection Agency. In fact, the assertion that the Department of Defense does not have the capacity to destroy the munitions generated by Edwards AFB is quite simply a falsehood. Indeed, Congress acted specifically to reduce the damage to the environment from OB/OD facilities when it appropriated the monies to build the enclosed destruction facilities at Hawthorne.

Because of the concerns about emissions from OB/OD facilities our members were instrumental in getting the Donovan Blast Chamber to come to California to detonate munitions at the Santa Susana Laboratory. We helped organize and host a Symposium on Alternatives to OB/OD with then director of DTSC, Ed Lowry, which DTSC staff were involved in planning and attending. We actively supported the permitting of the Donovan Blast Chamber through the Department of Defense Explosives Safety Board approval process. Subsequently to being permitted to destroy munitions, the Donovan Blast Chamber patents were sold to CH2M Hill and renamed the Controlled Detonation Chamber (Chamber).

Availability of Alternatives to OB/OD:

Ironically, in Section 2.1.1 of the DEIR the document says “the DOD will explore alternatives to OB/OD for the treatment of these wastes, when and if they become available.” (page 2-2) However, the Controlled Blast Chamber has been in use in California for over a decade. It has been used at Fort Hunter Ligget, Mare Island, and Camp Roberts, as we well as at the Santa Susana site. The Chamber has also been used the Camp Navajo in Arizona, at the Massachusetts Military Reservation in Massachusetts, and at the Redstone Arsenal in Alabama. The Chamber has been used safely in numerous campaigns to destroy propellants and energetics, it can be sized to fit the needs of Edwards AFB, and it is approved for use by the DOD Explosives Safety Board. (see Current Status of Transportable Controlled Detonation

Chambers Offered by CH2M Hill presented at the National Defense Industrial Association GlobalDemilitarization Symposium and Exhibition in Reno, Nevada, May 14-17, 2007.)

The Controlled Detonation Chamber meets the DOD TM5-1300 standard, the ASTM Impulse Loaded Code Case, and standards set by the American Welding Society and the American Institute of Steel Construction.

Moreover, the Department of Defense has looked at other ways to mitigate the impacts of OB/OD facilities as well as the impacts of munition range activities. These alternatives were not disclosed, addressed, or examined in the DEIR. They include using soil treatments to help immobilize the munition constituents. (In Place Soil Treatments for Prevention of Explosives Contamination, ER-200434, SERDP/ESTCP). DOD has also looked at the deactivation of energetics with reuse. (Safe Deactiviation of Energetic materials and Use of By-products as Epoxy Curing Agents, SERDP project CP-1070, November 2001). Lime has been used to slow or stop the movement of energetics and metals through the soil in an effort to stop groundwater contamination from occurring at ranges and OB/OD sites. (Open Burn/Open Detonation Area Management Using Lime for Explosives Transformation and Metals Immobilization, October 2011, ER-200742, ESTCP). DCAP does not endorse any of these technologies, but mentions them here to underscore the inadequacy of the alternatives analysis in the DEIR.

The author served as a member of the Nonstockpile Chemical Materiel Command Core Group, a group of experts advising the DOD about the challenges of OB/OD as a treatment for the destruction of chemical warfare agent. As part of this effort, the DOD created the Explosive Destruction System using a hydrolysis technology. This same technology was just used to destroy the chemical weapon components found in Syria. It has been used successfully at a number of chemical weapons sites across the country including Spring Valley in Washington DC, and at the Anniston Army Depot, to name a few. As part of our longstanding effort to stop the combustion of military munitions, our executive director served as an advisor to the Chemical Weapons Working Group, a key group working to end the incineration of our nation's chemical weapons program. The DOD, states, and affected communities formed a federal advisory group to look at alternatives to the incineration of our nation's chemical stockpiles. Super Critical Water Oxidization (SCWO) became one of the technologies of choice and recently three SCWO units were manufactured in (ironically) San Diego, California and shipped to Kentucky. These SCWO units will be used to demilitarize the chemical warfare agents which are energetically configured at the Bluegrass Army Depot near Berea, Kentucky. I see no mention of the SCWO technology being used to demilitarize the wastes being generated at Edwards AFB despite it being effectively used by both the Navy and the Army to destroy munitions. (see the work of the Chemical Weapons Working Group at cwwg.org)

Monitoring Provisions:

The DOD has spent considerable money and expertise coming up with new monitoring technologies, including Method 8330B to assess the potential risk due to the release of explosive material at OB/OD sites and on military ranges. They have floated a small dirigible with continuous monitors for a subset of the munition constitutents in the plumes during OB/OD operations. (the "FLYER") (see Feasibility of New Technology to Comprehensively Characterize Air Emissions, WP-1672, SERDP). Some of the efforts have been comical, some expensive, some have gathered valuable data from these OB/OD events, but none have completely characterized all the pollutants being emitted during these events. Moreover, none of these attempts to monitor emissions from OB/OD facilities have been performed at Edwards AFB with the unique constituents that are present in these experimental energetics and propellants being developed and disposed of.

Multi –metals emissions monitors are not yet in widespread use, even in California, in fact the first proposed use of a multi-metal continuous emissions monitor (CEMS-MM) is being proposed at the Exide Secondary Lead Smelter in Vernon, California by the South Coast Air Quality Management District. This will be its first regulatory application. These CEMS-MM have been proposed for use on military installation specifically for characterizing emissions from munitions destruction. There is no discussion of the use of this monitoring technology nor the "Flyer", nor the Aerosol Mass Spectrometer instrument suite in the DEIR. (see Continuous Emissions Monitor for Hazardous Air Pollutant Metals, WP-199807, SERDP; InSitu Characterization of Point-of-Discharge Fine Particulate Emissions, WP-200420, SERDP).

As well, LIDAR and FTIR technology could also be used to better monitor what is being released into the air at this proposed facility. These technologies are currently being mandated for use on refineries across the country in consent decrees negotiated by the USEPA. (see Feasibility of New Technology to Comprehensively Characterize Air Emissions, WP-1672, SERDP).

On May 13, 2014, Mr. Phillip Chandler entered an appeal to the Decision on Approval of the Final RCRA Class 3 permit modification for the Edwards AFB facility RCRA Equivalent Permit. In this appeal, Mr. Chandler refers to a number of short comings of the permit and the DEIR. This appeal raises a number of issues similar to the ones DCAP is raising in its comment on the proposed DEIR and Permit. We include this appeal as an attachment to our comments and incorporate those same issues in our comments.

Impacts of Munition Constituents:

"The hazardous waste treated at the EOD Range consists almost entirely of non-standard items." DEIR, page 7-6

"Ninety percent of the reactive waste comes from the AFRL, it is not possible to characterize it." DEIR Page 7-3

In the DEIR, it states that the majority of the munitions to be burned/detonated at the facility are experimental energetics generated from the labs at Edwards AFB. From the information presented in the DEIR it is not possible to know what is in the materials being burned, therefore it is impossible to know what will be emitted into the air, soil, and water. However, a quick internet search reveals that even the destruction of conventional munitions using this OB/OD technique has already contaminated air, land, and groundwater across the United States. The databases of the State Water Resources Control Board (Water Board) reveals dozens of sites on Geotracker contaminated with energetics and metals from OB/OD activities. The situation has become so dire that the Department of Defense (DOD) has instituted a number of studies to identify the extent of the contamination and to search for other ways to disposed of munitions. In a special type of irony, Edwards AFB was the first defense base in the country to pilot special cleanup technologies for perchlorate, a common groundwater contaminant at OB/OD ranges.

The Department of Toxic Substance Control purports to mitigate the potential for groundwater contamination at this proposed OB/OD site by having EAFB install groundwater monitoring wells. This is a bit like standing by and watching someone die from a heart attack. Once contaminated, groundwater is very expensive to cleanup. It would be far better to prevent the contamination in the first place, and indeed, it would seem to be the DTSC's primary purpose in granting a permit in the first place. DTSC's RCRA authorities do not grant it the authority to allow permittees to engage in activities that it knows will pollute the environment. Indeed, its very existence it to prevent contamination of the environment, not to watch it happen, and then issue cleanup orders after it occurs. Again, a simple trot through both Envirostor and Geotracker, the state's databases of contaminated sites are replete with military bases contaminated with energetics and metals from OB/OD activities. (www.envirostore.dtsc.gov and www.geotracker.gov). As well, there are reports generated by the DOD detailing the problem of energetics contamination on ranges across the United States. (Distribution and Fate of Energetics on DOD test and Training Ranges: Final Report. November 2006, Strategic Environmental Research and Development Program). (Remediation of Soils and Groundwater Contaminated with Metals, June 2006, ESTCP; Cost and Performance Report {ER-0020}).

Newer energetics do not have the toxicity data necessary to assess their impacts on human health, nor the information necessary to characterize their fate and transport in the

environment. (Evaluation of the Relative Risk of China Lake 20 {CL-20} Based on Current Toxicity, Fate and Transport, and other Technical Information, July 2007, Ivan Boyer, Ph.D. D.A.B.T.) Indeed, perchlorate was produced for decades before actual environmental standards were set for it in environmental media. Tragically, those standards were set after a great deal of environmental damage was done to groundwater from perchlorate contamination. The human health effects of perchlorate are primarily felt by the developing fetus since perchlorate is an endocrine disrupter. Perchlorate's public health goal in water is developed with the toxicity endpoint being the developing fetus. Clearly, energetics, propellants, and other chemicals used in munitions have the ability to create exquisite effects on human health and, indeed, we have already suffered both the environmental and public health effects of perchlorate contamination of our water. This lesson should not be repeated by the release of new, experimental energetics and propellants into the air and groundwater at Edwards AFB through its OB/OD activities. (Notably, the author was the author of the request to USEPA to add perchlorate to the contaminants list under the Clean Water Act many years ago).

Impacts to Protected Species:

Desert Citizens Against Pollution is primarily interested in protecting the public from the crippling health effects of exposure to pollution. However, we were plaintiffs in the suit which established the critical habitat for the endangered tortoise, and we have taken numerous to protect the tortoise and its habitat from pollution in the ensuing years since that success suit under the Endangered Species Act.

We note with dismay that the proposed OB/OD facility is right next to protected habitat for the endangered tortoise. We also note with dismay that there was no attempt to characterize the impacts of heavy metal and energetics pollution on the tortoise, and the impacts of the noise from the OB/OD facility on the tortoise. The DEIR did say that "impacts to the tortoise from noise can have permanent effects on the hearing of the tortoise with frequent exposure." [page 4-153-4]. Activities at the proposed facility will be occurring very frequently and noise pollution is a known deterrent to the mating habits of the tortoise and is very stressful to them. The impacts of noise at ground level, such as from this facility, are very damaging to the tortoises. We believe that Edwards AFB should seek a biological opinion from US Fish and Wildlife on the effects of this facility on the neighboring protected habitat.

Conclusion:

Department of Defense policy requires all military ranges to be operated in ways that ensure their long-term viability to meet the national defense missions while protecting human health and the environment. These policies further require the DOD to respond to a release or

substantial threat of a release of munitions constituents to off range areas. (DOD Directive 4715.11, www.dtic.mil/whs/diretives/corres/pdf/471511p.pdf). There are many constituents which can travel through the air and subsoils contaminating groundwater and air. From the DEIR, Edwards AFB states that it does not know the constituents that are the waste it is producing. Why then would the state give permission for those unknown constituents to be released into the air, soil, and water of the state?

It is not lawful for the state to give permission to release pollutants which are unknown into the environment. The health risk assessment performed for this permit is clearly inadequate when it states that the emissions from the proposed activity would not harm human health or the environment when the proponent of the project cannot tell us what is being released by the activity.

EAFB is clearly stating that the materials are so dangerous and unstable as to not be safe to transport to an offsite treatment facility. Why then are these materials safe to be open burned as hazardous waste a few miles from peoples' homes and schools? EAFB then states that there is no alternative to its open burn/open detonation plan for these materials, when this is clearly false as a quick internet search yields many different options that were not examined in the DEIR.

Clearly, a good look at the alternatives to OB/OD these materials and a much better understanding of what kinds of chemicals will be treated by the proposed facility are needed if the promise of the Resource Recovery and Conservation Act are to be realized. We thank you for the opportunity to review the DEIR and to comment on the document. We look forward to working cooperatively with the DTSC and Edwards AFB to solve the challenge of more protectively handling the munitions and energetics and propellants produced at Edwards.

Cordially,

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Executive Director

Desert Citizens Against Pollution

(b) (6)