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REPONSE TO COMMENTS TO EDWARDS AIR FORCE BASE OPEN BURN/OPEN DETONATION UNITS CLASS 3 HAZADOUS WASTE PERMIT MODIFICATION AND DRAFT ENVIRONMENTAL IMPACT REPORT (STATE CLEARING HOUSE NO. 2003111120)

INTRODUCTION

This document constitutes the Response to Comments (RTC) by the Department of Toxic Substances Control (DTSC) on the Draft Edwards Air Force Base (Edwards), Class 3 Hazardous Waste Facility Permit Modification (Permit) and Draft Environmental Impact Report (DEIR). A second public comment period was held from July 22, 2014 through September 19, 2014 and a second public hearing was held on August 27, 2014. No comments were received from the public at the hearing. During the comment period, letters were received from the Eastern Kern Air Pollution Control District and Tejon Indian Tribe. DTSC notes these letters and they are included as attachments to this RTC document. Comments were submitted via e-mail by Ms. Jane Williams on behalf of Desert Citizens Against Pollution. In her comments, Ms. Williams also included comments from a previous appeal to approve the Permit submitted by Mr. Phillip Chandler. Comments were also submitted by Ms. Shannon Utley from the Lahontan Regional Water Quality Control Board. Responses to comments from Ms. Utley, Ms. Williams, and Mr. Chandler are provided below.

All public comments received during the first public comment period held from August 13, 2013 through October 14, 2013 along with DTSC's responses are also included as part of the administrative record to this Permit decision and are attached to this RTC. DTSC wishes to thank the commenters for their participation in this public review process.

The term "OB/OD" used herein refers to open burn/open detonation, a treatment method.

DTSC has made one change to the draft Permit. On page 3, the address of the Operator will be changed to reflect the correct address, which is on the cover of the draft Permit.

COMMENTS FROM MS. SHANNON UTLEY (1-2)

COMMENT #1

Water Board staff understands from the DEIR/DEA that no modification of existing drainages will occur during operations. We request natural drainage patterns be maintained during the duration of site activities.

DTSC RESPONSE

Comment noted. There are no existing streams or rivers on or near the site. The closest permanent surface water is located west of Rogers Dry Lake at Branch Park approximately 5.5 miles from the OB/OD Units. The small graded surface of the OB/OD Units and perimeter road would not be great enough to significantly increase graded surfaces and result in increased runoff that could cause substantial erosion or siltation on or off site, or change the existing drainage pattern.

COMMENT #2

Water Board staff understands that any waste removed from the OB/OD units will be disposed of at the on base permitted facility only.

DTSC REPSONSE

Any ash and debris removed from the EOD Range following an OB/OD event that is determined to be hazardous would be stored at the permitted hazardous waste storage area on Edwards before shipment offsite for final treatment and or disposal.

COMMENTS FROM MS. JANE WILLIAMS (3-18)

COMMENT #3

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.

DTSC RESPONSE

Your comment is noted.

COMMENT #4

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.

DTSC REPSONSE

The commenter states that according to the DEIR, the City of Rosamond is downwind of the OB/OD units.

Page 4-6 of the DEIR states the following:

"The prevailing wind direction is from the southwest to west (225 to 270 degrees) throughout the year with wind speeds generally below 16 knots (18 miles per hour) (Figure 4.3-3, Windrose)."

This means that the prevailing winds blow from the southwest to west towards the northeast or east direction, which is in the opposite direction of Rosemond.

COMMENT #5

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.

DTSC RESPONSE

The commenter is concerned about the environmental impacts from OB/OD, citing Sierra Army Depot as an example and states that waste munitions generated at Edwards could be sent to an enclosed destruction facility at Hawthorne AFB.

DTSC required Edwards to complete a Health Risk Assessment (HRA), Ecological Risk Assessment (ERA), and has prepared a draft Environmental Impact Report (DEIR) and included special conditions in the draft permit to ensure the OB/OD operations at Edwards do not cause any significant impacts to the environment or significant risks to human health.

According to their current RCRA Permit, Hawthorne Army Depot has two permitted units that are used to treat energetic, waste propellants. The first is a Bulk Energetic Demilitarization System (BEDS) incinerator. It consists of a feed system, a rotary kiln, and a combustion chamber, which is coupled with a slurry feed system and pollution abatement system. However, the permit states that funding for this unit has never been available since it was constructed and it has never operated. It currently remains under a temporary closure status.

The second permitted unit used to treat waste propellants is an open burn unit. It is currently operating and is authorized under certain conditions to treat up to 2.6 million pounds of waste per year, which is approximately 17 times the amount Edwards is requesting authorization. Hawthorne's 7/23/2013 application for the current RCRA Permit, states that "OB is used for treatment of energetic materials because it is the only safe and effective treatment processes currently available for most energetic material items."

Hawthorne Army Depot also has a permitted open detonation unit for treatment of waste munitions under a RCRA permit separate from the OB unit. It is authorized to treat munitions stored at the main base and munitions received from other U.S Government installations. The allowed permitted throughput is 6 million pounds per year under certain conditions. There are two other enclosed incinerators at Hawthorne that can be used for treatment of hazardous waste munitions. However, the permit appears to indicate only one is operating and its allowed annual treatment capacity is far less than what is allowed for open detonation.

Overall, even though alternative methods have been explored and constructed at Hawthorne, OB/OD appears to be its main method for treatment of explosive waste streams similar to those generated at Edwards. In addition, as discussed on page 2-2 of

the DEIR, the capability to treat reactive hazardous waste generated by Edwards' RDT&E activities onsite is critical to the RDT&E mission, because the unstable nature of the hazardous waste makes transport to other installations unsafe.

COMMENT #6

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).

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.

DTSC RESPONSE

The commenter suggests that a Controlled Detonation Chamber (CDC) could be used as an alternative to treat waste munitions at Edwards instead of using OB/OD due to concerns from emissions.

In regards to public concerns from OB/OD emissions, DTSC required Edwards to complete an HRA that has shown that the risk of cancer and non-cancer health effects

from the emissions generated from the maximum amount of waste they are requesting authorization to treat would be well below the acceptable threshold.

The CDC was discussed in Appendix E of the DEIR. CDCs have been successfully used in the past to treat munitions. However, because of the cost to operate a CDC, low volume of Edwards waste streams, and low risk resulting from OB/OD treatment (as determined in the HRA), it was determined that the use of a CDC would not substantially lessen any potential environmental impacts resulting from the OB/OD treatment operations at Edwards.

COMMENT #7

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.

DTSC RESPONSE

The commenter cites technologies alternative to OB/OD that she feels were left out of the DEIR and states that therefore the alternatives analysis in the DEIR is inadequate.

Two of the alternatives mentioned (In Place Soil Treatments for Prevention of Explosives Contamination and Open Burn/Open Detonation Area Management Using Lime for Explosives Transformation and Metals Immobilization) appear to address technologies that are used for soil remediation or mitigation. Remediating soils is not the purpose of the draft permit or DEIR; therefore it would not be appropriate to analyze these alternatives. The DEIR addresses alternatives to treatment of waste Propellant, Explosives, and Pyrotechnics (PEP) and PEP contaminated laboratory waste by OB/OD on pages 7-1 through 7-9.

The deactivation of energetic materials using organic amines and reusing the by-products as epoxy curing agents was disclosed and addressed in Appendix E of the DEIR.

COMMENT #8

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)

DTSC RESPONSE

The commenter states that a SCWO unit, which is being used to demilitarize chemical warfare agents, was not discussed by DTSC and is an effective alternative to OB/OD at Edwards.

The draft permit does not allow chemical or biological warfare agents to be treated by OB/OD. The RCRA Part B/Subpart X Permit Application for the Explosive Ordnance Disposal Range at Edwards Air Force Base Edwards AFB (Permit Application) states that Edwards "does not handle biological, chemical or nuclear munitions. The munitions used at Edwards AFB are in support of the following activities:

- Aircraft RDT&E operations;

- Warehoused munitions identified by the MSA inspection schedule tracking program, which stores information about the life cycle of each munitions lot and identifies munitions items with an expired life cycle; and

- Miscellaneous munition shipments from foreign armed forces used in RDT&E operations at Edwards AFB in support of multinational programs and foreign military sales."

The SCWO technology is discussed in Appendix E of the DEIR as one of the alternative treatment technologies to OB/OD. The main issue with the technology, other than higher cost, comes from the fact that the waste propellants generated at Edwards are mainly in solid form and are in relatively small quantities. The treatment would require additional handling of the waste to make slurry, which could result in additional impacts.

COMMENT #9

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.

DTSC RESPONSE

The commenter cites monitoring technologies that have been used to monitor emissions from OB/OD sites and states that they were not used at Edwards and regardless, cannot fully characterize all pollutants from an OB/OD event.

The first monitoring technology - Method 8330B is a high performance liquid chromatographic procedure used for detection of certain explosive and propellant residues in water and soil. This is not a technology used for the treatment of PEP waste.

However, DTSC appreciates and can possibly use this information when evaluating environmental monitoring plans required in the draft permit.

To the Department's knowledge, Edwards did not conduct the feasibility study (WP-1672) referenced. However, Edwards did conduct (with a fair amount of success) their own experimental, real-time burn event to assist with emission characterization and quantification. This event is discussed on page 4-104 of the DEIR. Edwards also has relied upon emissions data from previous controlled studies completed at other military installations, where burns were conducted and measured in enclosed environments.

It has long been acknowledged that there is difficulty in identifying the complete chemical composition of the smoke plume that is generated from an OB/OD event. The characteristics or reactions within the plume continue to change with time and distance as it cools and mixes with the air. The draft permit requires Edwards to continue to research and submit reports on real-time air sampling methods for OB/OD.

The HRA evaluated the exposure risk of approximately 140 contaminants of concern (COCs) and determined that the risk of cancer and non-cancer health effects from OB/OD activities would be well below the acceptable threshold. Data on the COCs emitted during the combustion of PEPs, and their corresponding emission factors, were obtained from extensive source test measurement studies conducted by the Department of Defense and from waste composition data.

The HRA discusses the uncertainty associated with the final risk values with regard to the selection of COCs. However, as stated in the HRA, the COCs evaluated "include many chemicals commonly associated with activities of this nature that have elevated toxicities, and are likely representative of the highest emitted COCs. Therefore, omission of COCs from the HRA is unlikely to lead to a substantial underestimation of health risks."

COMMENT #10

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).

DTSC RESPONSE

The commenter cites monitoring technologies that could possibly be used to monitor emissions from the OB/OD units at Edwards and states that they were not discussed in the DEIR.

As stated in the previous response, Edwards conducted their own experimental, real-time burn event to assist with emission characterization and quantification and relied upon emissions data from previous controlled studies completed at other military installations. DTSC has determined that the 140 COC's evaluated in the HRA and listed in Table 4.3-3 in the DEIR is sufficient in quantifying the risk from OB/OD events to the public.

It should also be noted that Edwards submitted a Burn Plan which is described on pages 4-9 through 4-11. The Burn Plan includes provisions to limit operations when meteorological conditions could result or contribute to an exceedance of air quality standards or create a public nuisance. The Burn Plan also does not allow operations if emissions may drift into a populated area or create a public nuisance. Air Quality Protection Measures also do not allow operations during periods of winds in excess of fifteen (15) miles per hour.

Again, DTSC appreciates the references to the monitoring technologies cited and can possibly use this information when evaluating environmental monitoring plans and air monitoring technology studies submitted by Edwards as required in the draft permit.

COMMENT #11

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.

DTSC RESPONSE

Comment noted. Please see the DTSC responses to the appeal submitted by Phillip Chandler.

COMMENT #12

"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.

DTSC RESPONSE

The commenter states that it is not clear in the DEIR what the energetics generated from Edwards' labs are made of and therefore DTSC does not fully know what is being emitted from the OB/OD operation.

The first statement quoted by the commenter from page 7-6 in the DEIR is taken from a section that discusses offsite treatment and disposal as one of the alternatives to onsite OB/OD. Referring to the hazardous wastes to be treated by OB/OD as "non-standard items" is simply saying that there are difficulties when trying to fit the hazardous wastes into the standard classification guidelines used by the Department of Transportation.

Page 7-3 from the DEIR states the following:

> "Because over 90 percent of Edwards' reactive hazardous waste comes from the AFRL facilities, it is not possible to classify the waste for transportation on public roads."

Having classification issues associated with transporting the hazardous waste does not mean it is impossible to know what is in the material being treated by OB/OD. The make-up of the waste energetic propellants generated by the Air Force Research Lab (AFRL) is known and described in Edwards' Permit Application. They contain ammonium perchlorate/nitrate oxidizers, aluminum powder fuel, poly organic binding agents, iron oxide powders, and epoxy curing agents. The Permit Application states "the chemical makeup of the different formulations within a propellant type does not vary significantly. The variations in different propellant formulations are usually a matter of physical parameters such as particle grain size or small variations in constituent quantities." Edwards also uses a batch sheet form in their labs to provide the chemical ingredients used in the propellants. Edwards provides an example of this form in their Permit Application. The form "describes the ingredient list used by AFRL personnel to mix the propellant and provides chemical analysis data that can be used to determine the appropriate treatment method for the waste propellant material."

The DEIR does not go into detail with this information because its purpose is to disclose impacts to the environment from the treatment of hazardous waste by OB/OD. Therefore, the emissions or contaminants of concern that are generated from the treatment of the waste are the focal point. Not the chemical makeup of the wastes on their own.

COMMENT #13

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}).

DTSC RESPONSE

The commenter states that OB/OD activities at Edwards will result in contamination to the environment, specifically to groundwater, as they have at other sites throughout the United States and therefore DTSC should not be allowed under RCRA to authorize or approve the class III permit modification.

The draft permit prepared by DTSC includes conditions that are meant to minimize impacts to human health and the environment from the OB/OD operations at Edwards. For example, the draft permit states the following:

- Treatment residues in soil shall not exhibit a hazardous waste characteristic as defined by Title 22, Cal. Code Regs. Division 4.5, Chapter 11.

- The annual quantity for OD and OB combined shall not cause a carcinogenic risk threshold of 1 x 10-6 (1 in a million) to be exceeded at any offsite location, as calculated in the approved Human Health Risk Assessment.

- The annual quantity for OD and OB combined shall not cause a noncarcinogenic chronic hazard index of 1.0 to be exceeded at any offsite location, as calculated in the approved Human Health Risk Assessment.

Edwards is also required in the draft permit to adhere to treatment capacity limits and implement DTSC-approved environmental monitoring programs, which include groundwater monitoring.

Please see Section 4.8, Hydrology & Water Quality, of the DEIR for a complete description of potential impacts to water quality.

COMMENT #14

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.

DTSC RESPONSE

The commenter is concerned about the impacts from OB/OD events on the desert tortoise and states that the impacts were not characterized in the DEIR. The commenter believes that Edwards should seek a biological opinion from US Fish and Wildlife.

Impacts to biological resources including the desert tortoise are discussed in Section 4.4 of the DEIR and impacts from noise to animals are discussed in section 4.9. Protective measures specific to the desert tortoise including the monitoring of contaminants to soil are listed in table ES-1 of the DEIR. As a result of these protective measures, impacts were considered to be less than significant.

At the time the DEIR was being compiled, Edwards was required to follow the 1994 Biological Opinion (BO) issued by the US Fish and Wildlife. This BO addressed activities at the Precision Impact Range Area, where the OB/OD units are located and was included as appendix C-4 to the DEIR.

The draft permit contains the following conditions that address the desert tortoise.

- The Permittee shall implement the terms of the current Biological Opinion for the Precision Impact Range Area issued by the U.S. Fish and Wildlife Service on March 10, 1994 or any future updated or superseding Biological Opinion relevant to the Explosive Ordnance Disposal Range. All personnel working at the Explosive Ordnance Disposal Range facility shall have completed an awareness briefing following the requirements delineated in the Biological Opinion.

- The Permittee shall have an authorized biologist conduct a visual survey of the Explosive Ordnance Disposal Range facility (within the fenced area and a 300 feet buffer area around the outside of the fenced area) at least 48 hours prior to each OB/OD event. Survey findings shall be documented in the event log and shall include observations of any animal species listed as threatened, endangered, or as a special species of concern by the California Department of Fish and Wildlife and any nests or burrows left by these species.

- Should desert tortoises be encountered in the area potentially affected by OB/OD operations, measures shall be implemented in accordance with the Biological Opinion and delineated in the required annual report. Desert tortoises noted in any area potentially affected by OB/OD operations shall be relocated by an authorized biologist prior to any event initiation. All such encounters shall be documented in the event log as well as in the annual report.

COMMENT #15

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?

DTSC RESPONSE

The commenter states that the constituents of the waste treated by OB/OD are unknown and questions how the State could authorize the treatment.

The commenters' reference to the DOD policy is noted. The chemical ingredients used in propellants generated at Edwards are known. Please see response to comment #12.

The HRA evaluated the exposure risk of approximately 140 COCs that may result from an OB/OD event. Please see response to comment #9.

COMMENT #16

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.

DTSC RESPONSE

The commenter again states that the pollutants released by the OB/OD activities are unknown and it is therefore unlawful for the State to authorize treatment by OB/OD.

The HRA evaluated the exposure risk of approximately 140 contaminants of concern (COCs) and determined that the risk of cancer and non-cancer health effects from the OB/OD activities would be well below the acceptable threshold. Please see response to comment #9.

COMMENT #17

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.

DTSC RESPONSE

The commenter states that because the waste treated by OB/OD is unsafe for transport that it also must be unsafe to burn at the proposed location, which is a few miles from homes and schools. The commenter also states that alternatives to OB/OD found on the internet were not included in the DEIR.

The waste treated by OB/OD at Edwards is an explosive hazard. OB/OD is a highly effective form of treatment that eliminates this hazard. The OB/OD units are located in a sparse area on base. The closest homes are likely to be found in High Vista, which is approximately 6 miles south and in the opposite prevailing wind direction of the OB/OD units. The closest schools are Desert Junior High, located on base approximately 10 miles to the northwest and Challenger Middle School, located off base in Lake Los Angeles approximately 13 miles south of the OB/OD units.

A reasonable range of alternatives to OB/OD were analyzed in the DEIR as required by the California Environmental Quality Act (CEQA) Guidelines and Federal Environmental Impact Analysis Process. In addition, a thorough evaluation of alternative technologies was included in Appendix E of the DEIR.

COMMENT #18

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.

DTSC RESPONSE

Comment noted.

COMMENTS FROM MR. PHILLIP CHANDLER (19-31)

COMMENT #19

The OB/OD unit is essentially an open-air hazardous waste incinerator. DTSC utilizes the miscellaneous unit regulations to govern it---in large measure to avoid the title and quite restrictive hazardous waste incinerator regulations. In any event, however, the hazardous waste incinerator regulations as well as many other regulations covering specific types of units can be applied because of the way the miscellaneous unit regulations were written. Miscellaneous units are a hodge-podge---from smelting kettles to filter presses, and therefore its regulations were written to allow use of most of the other unit-specific regulations. DTSC has failed to do this with the Class 3 permit

modification (C3PM). I therefore petition that DTSC go back and properly apply its own regulations to provide adequate protection for human health and the environment. At the same time it must re-visit its inadequate CEQA compliance.

DTSC RESPONSE

The commenter states that the OB/OD units are essentially incinerators and DTSC has failed to apply hazardous waste incinerator regulations and others to the OB/OD units, and requests that it do so.

Throughout Title 22, Division 4.5, of the California Code of Regulations (CCR) are regulations written specifically for the governance of a miscellaneous unit, which is defined under 22 CCR, Chapter 10, §66260.10. It is the goal of DTSC to follow these regulations because the OB/OD units are defined as miscellaneous units, not to avoid other regulations.

It is true that the regulations for miscellaneous units contain references to other regulations that may apply when or if they are appropriate. The commenter does not provide any examples of regulations that apply to incinerators as defined by 22 CCR, Chapter 10, §66260.10 that should also apply to the OB/OD units at Edwards. The commenter has also not provided any evidence that the CEQA compliance was inadequate.

COMMENT #20

DTSC actually cited CCR, 22, §66264.706(b) under Part III, Condition 4(A)(1)(d) of the draft Class 3 Permit Modification for Kettleman Hills Facility KHF), as the basis for requiring under state authority that KHF to provide for representative sampling of PCBs in the ambient air----after decades of shirking implementation of its statutory and regulatory authorities with regard to air monitoring at its RCRA facilities. However, it fails to do the same with the Air Force and claims that it cannot do the same for the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and §66270 to include the appropriate specifications of environmental monitoring.

DTSC RESPONSE

The commenter states that DTSC fails to require the air monitoring for the OB/OD units at Edwards that it required for the KHF, and requests that it do so.

The air monitoring required for the KHF is not required for the operation of the OB/OD units at Edwards. The representative sampling referenced in the comment and cited

under 22 CCR, §66264.706(b) was required for KHF because KHF is defined as a regulated unit under 22 CCR, Chapter 10, §66260.10. Regulated units are required to follow the environmental monitoring response programs listed under 22 CCR, Chapter 14, Article 17.

The OB/OD units at Edwards are defined as miscellaneous units under 22 CCR, Chapter 10, §66260.10. Miscellaneous units are required to follow the environmental performance standards under 22 CCR, Chapter 14, Article 16, §66264.601. Nowhere in this section does it state that facilities with miscellaneous units must meet or submit reports pertaining to the requirements of 22 CCR, Chapter 14, Article 17 in order to operate.

The commenter does not explain how or why the air monitoring required for the KHF landfill would be appropriate or effective for the OB/OD units at Edwards. DTSC has determined the ambient air monitoring conducted at the KHF is not appropriate to monitor the operation of the OB/OD units and this does not keep the units from meeting the criteria specified in 66264.601. OB/OD events are short term or instantaneous events that occur irregularly and which create very high temperatures and pressures. The plume generated is heavily affected by ambient weather conditions and traditional air monitoring approaches using real-time analyzers are not viable.

Air sampling and monitoring for OB/OD is a challenge that has been well documented. As a condition in the draft permit, DTSC requires Edwards to continue research and submit reports on air sampling methods for the OB/OD units. DTSC required Edwards to complete a Health Risk Assessment (HRA), which showed that the cancer and non-cancer health risks to surrounding receptors associated from the proposed OB/OD operation were below acceptable limits. A Burn Plan has also been completed. See response to comment #10.

COMMENT #21

DTSC actually required an additional ambient air monitoring point in Part III, Condition 4(A)(1)(e) of the draft KHF Class 3 Permit Modification, as the basis for requiring under state authority. DTSC fails to do so for the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and provide for an air monitoring and response plan under Title 22 CCR §66264.706(b). Ambient air monitoring alone is an inadequate monitoring response with respect to emissions from the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. Specifically, deposition and accumulation of airborne emissions is a major pathway to public exposure that DTSC is aware of but neglects, even at its most dangerous emitting sites such the Exide or Quemetco

secondary lead smelters in Los Angeles. Edwards needs to be required to provide a program of deposition monitoring in outside the facility boundaries. Please note that deposition and accumulation of airborne lead emissions has been found 3600 around the above-cited lead smelters so that even the proposed ambient air monitoring may not produce adequate representation.

DTSC RESPONSE

Again, the commenter states that because an ambient air monitoring point was added as a condition of the KHF permit to meet the requirements under 22 CCR, Chapter 14, Article 17, that it must then be required for the miscellaneous units at Edwards.

As stated in the previous response, DTSC has determined the ambient air monitoring conducted at the KHF is not appropriate to monitor the operation of the OB/OD units. The HRA completed for the OB/OD units at Edwards addresses the superficial deposition/accumulation of particulates containing waste constituents. Section 4.4.1, Model Selection, explains that Ground Level Concentrations (GLCs) for COCs resulting from OB/OD operations were determined from air dispersion modeling which followed the practices specified in OEHHA guidelines. The guidelines are consistent with the Guide on Air Quality Monitoring (USEPA 2005a) Title 40 Code of Federal Regulations 51 Appendix W, and incorporated portions of the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP, USEPA 2005b). Section 4.5, Multipathway Analysis explains the human exposure to emissions from OB/OD operations via inhalation, soil ingestion, dermal contact and Mother's Milk ingestion pathways.

COMMENT #22

DTSC fails to honor "Each permit issued must also include terms and conditions as the Department determines necessary to protect human health and the environment from hazardous waste treatment, storage and disposal related activities. (HSC Section 25200; Cal. Code Regs., title 22, section 66270.32.) DTSC clearly has some discretion in deciding whether to issue and, if so, how to condition issuance of a HWFP modification but it must also honor the above. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §§66264 and 66270.

DTSC RESPONSE

The commenter states that conditions in draft permit do not adequately protect human health and the environment.

DTSC has included several unit specific and special conditions in the draft permit with the purpose of ensuring that the facility operates in compliance with the applicable laws and regulations. Specifically, conditions were written to ensure the OB/OD units meet the environmental performance standard for miscellaneous units under 22 CCR, Chapter 14, Article 16, §66264.601, which states "a miscellaneous unit shall be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment."

COMMENT #23

The development of a Health Risk Assessment is normally required for a HWFP. DTSC typically fails to address airborne emissions deposition and accumulation in them. A corollary is that Title 22 CCR §66270.14(c) (6) (B) requires the Permittee to establish detection monitoring programs for ALL media, including air. Section 66264.701(a) requires the Permittee to conduct monitoring and response programs for various environmental media of the regulated unit, including air, pore-gas, and soil. DTSC has not adequately complied with the requirements of Title 22 CCR, Division 4.5, Chapter 14, articles 17 nor of Title 22 CCR §66270 et seq. for all environmental media at the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and provide for detection monitoring programs for accumulation in soil from the emissions and airborne deposition rates under Title 22 CCR §66264.706(b).

DTSC RESPONSE

The commenter states that the HRA and draft permit do not adequately address monitoring of all environmental media and that the draft permit be revised, specifically to include required monitoring programs under Title 22 CCR §66270.14(c)(6)(B), §66264.701(a), and §66264.706(b).

The monitoring programs cited in the comment are not required for Miscellaneous units. Miscellaneous units are required to follow the environmental performance standards under 22 CCR, Chapter 14, Article 16, §66264.601. To fulfill these standards, DTSC requires Edwards to establish a monitoring program for the OB/OD units. The draft permit contains a condition that states "the Permittee shall implement DTSC-approved environmental monitoring programs, including sampling, analysis, statistical and trend analysis for soil, ecological receptors, groundwater, and other media as specified by DTSC. The plan for the monitoring programs shall include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk to any media."

The HRA addresses the superficial deposition/accumulation of particulates containing waste constituents. Please see response to comment #21.

COMMENT #24

DTSC describes that the ambient air monitoring program at the real-live open-air hazardous waste incinerator aka OB/OD at Edwards will be that to satisfy the local AQMDs. DTSC typically fails to use the waste codes that it proposes to authorize to develop the monitoring parameters.

It claims that the program is designed to protect human health and the environment, assess releases of volatile organic compounds, semi-volatile compounds, metals, and particulates.

AQMD use of historic waste profiles and emission characterization to establish the list of monitoring parameters not match the waste codes being authorized by DTSC. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and provide for detection monitoring programs for accumulation in soil from the emissions and airborne deposition rates under Title 22 CCR §66264.706(b) of the authorized waste constituents and their daughter products.

DTSC RESPONSE

It is unclear what ambient air monitoring program the commenter is referring to. The hazardous waste codes for the hazardous waste treated by OB/OD at Edwards are D001 and D003. It is unclear how the commenter is requesting these waste codes be used for developing monitoring parameters or what they have to do with developing a detection monitoring program for waste constituents and their daughter products. Again, the commenter requests that the permit be revised to follow Title 22 CCR §66264.706(b).

Edwards was required to submit a Burn Plan to the Eastern Kern Air Pollution Control District as required by their Rule 416. The Burn Plan contains an air quality impact analysis showing expected impacts with respect to state and federal ambient air quality standards.

The draft permit contains a condition that requires Edwards to submit to DTSC for approval an environmental monitoring program. See response to comment #23

COMMENT #25

DTSC fails to honor in the C3PM, that Title 22 CCR § 66264.704(a) states that DTSC "...will specify in the facility permit the hazardous constituents to which the environmental protection standard of §66264.702 applies." DTSC has not done this properly. It further states that "Constituents specified in the permit will be limited to constituents reasonably expected to be in or derived from waste contained in a regulated unit." Clearly the waste that is to be contained in the C3PM unit is the waste it is being permitted for. Emissions from single point in time, given all of the authorized waste codes, are not acceptable. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and specify the hazardous constituents under for the environmental protection standard Title 22 CCR §66264.704(a) of the authorized waste constituents and their daughter products.

DTSC RESPONSE

The commenter states that DTSC does not properly include all waste constituents from OB/OD operations in the draft permit and requests that it be revised to do so.

Again, the environmental protection standard for a miscellaneous unit is set forth in 22 CCR, Chapter 14, Article 16, §66264.601 and there is no requirement to follow the standards for a regulated unit under Title 22 CCR §66264.704(a). However, hazardous waste constituents to be monitored from OB/OD events will be included in the DTSC approved environmental program as required in the draft permit. DTSC has the authority under 22 CCR, Chapter 20, Article 3, §66270.33 to specify in the permit a schedule of compliance leading to compliance with the statutes and regulations.

COMMENT #26

Title 22 CCR §66264.704(a) states that "The facility permit shall specify concentration limits for soil, soil-pore gas, and open-air downwind from the regulated unit, for hazardous constituents established under section 66264.703." DTSC fails to do this when it simply including another agency's emissions permit. Such permits rarely suffice for all of the constituents covered by the RCRA waste codes that DTSC proposes to authorize. DTSC has not provided the required specification such that the public can reasonably discern it. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and specify the concentration limits hazardous constituents under for the environmental protection standard Title 22 CCR §66264.704(a) of the authorized waste constituents and their daughter products.

DTSC RESPONSE

The commenter states that DTSC does not properly include limits on all waste constituents from OB/OD operations in the draft permit and requests that it be revised to do so. It is unclear by what the commenter means by stating that "DTSC fails to do this when it simply including another agency's emissions permit."

Hazardous constituents will be included in the DTSC environmental monitoring program submitted by Edwards. Please see response to comment #25.

COMMENT #27

Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for air for the regulated unit. DTSC should have required the Permittee to submit to DTSC, for review and approval, an Air Monitoring and Response Plan (AMRP) for the additional stations. This AMRP should have incorporated sampling procedures and analytical protocols that are in accordance with those needed for all chemicals in the proposed RCRA waste codes. This AMRP should have been included as an exhibit to the Operation Plan. Sampling procedures and analytical protocols shall be in accordance with ALL applicable guidance for both ambient air and deposition monitoring. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and require an AMRP for the real-live open-air hazardous waste incinerator aka OB/OD at Edwards.

DTSC RESPONSE

The commenter states that an AMRP under Section 66264.701(a) is required for the OB/OD units and requests that the permit require Edwards to submit one to DTSC.

An AMRP as specified and required under section 66264.701(a) for regulated units is not required under 66264.601for miscellaneous units nor did DTSC determine one to be appropriate. As stated in the response to comment #20, air sampling and monitoring for OB/OD is a challenge and traditional monitoring programs that are appropriate for a regulated unit (landfill, surface impoundment, waste pile, etc.) are not appropriate or useful for an OB/OD unit.

DTSC required Edwards to submit an HRA, which included air dispersion modeling to ensure that the OB/OD units operate in a manner that meets the environmental performance standard under 22 CCR, Chapter 14, Article 16, §66264.601.

COMMENT #28

DTSC fails to address multi-media compliance inspections. The Permittee should also be required to comply with the results and recommendations of any Comprehensive Monitoring Evaluation (CME) to be conducted by DTSC with regard to air ---in particular airborne deposition and accumulation. I petition that DTSC revise the permit to address CMEs for airborne deposition and accumulation at the real-live open-air hazardous waste incinerator aka OB/OD at Edwards.

DTSC REPSONSE

It is unclear what the commenter means by "multi-media compliance inspections." There is no regulatory reference provided. If he is referring to multi-media monitoring, that is required by DTSC in draft permit.

The commenter does not make clear how a "CME" involving airborne deposition and accumulation should be applied to the OB/OD units at Edwards. The risk from superficial deposition/accumulation of particulates containing waste constituents from the OB/OD units was addressed in the HRA and it showed it to be below any level of concern. The environmental monitoring program required by the draft permit for the OB/OD units will include monitoring of the surrounding soils and also must include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk.

COMMENT #29

Hazardous waste constituents may be emitted into the ambient air from the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. These airborne hazardous waste constituent emissions may deposit onto the land surface and accumulate as DTSC has established at the secondary lead smelters that it regulates in Los Angeles. Therefore, a monitoring and response program must be conducted for soil. [Title 22 CCR §66264.701 (a) and 66264.702(b)] In addition, the California Code of Regulations, title 22, section 66264.310(c) requires the Permittee to prevent lateral migration of waste, gas, and vapor from the C3PM unit. Deposition and accumulation of airborne landfill emissions clearly represents a form of "lateral migration" of waste. Title 22 CCR, §66270.14(c) (6) (B) also requires soil-pore gas monitoring. I petition that a monitoring and response plan shall be included in the C3PM and shall include, at a minimum, the applicable elements of the California Code of Regulations, Title 22.

DTSC RESPONSE

The commenter requests that a monitoring and response plan be submitted by Edwards to DTSC to monitor airborne hazardous waste constituents that may be deposited and

thus accumulate in the surrounding soils. The commenter also states that monitoring of soil-pore gas is required.

The draft permit contains a condition that states "the Permittee shall implement DTSC-approved environmental monitoring programs, including sampling, analysis, statistical and trend analysis for soil, ecological receptors, groundwater, and other media as specified by DTSC. The plan for the monitoring programs shall include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk to any media."

COMMENT #30

Concentration Limits for air, soil-pore gas and soil are described in Title 22, CCR §66264.704(a) which states "The facility permit shall specify concentration limits for soil, soil-pore gas, and open-air downwind from the regulated unit, for hazardous constituents established under §66264.703." [emphasis added] Title 22 CCR § 66264.704(b) states, in part, that "The concentration limit for a hazardous constituent in soil outside the regulated unit shall not exceed the background concentration of that constituent in the soil..." DTSC fails to do this. I petition that DTSC revise the C3PMto meet the requirements of title 22, CCR, §66264 and require that the concentration in soil outside the real-live open-air hazardous waste incinerator aka OB/OD at Edwards shall not exceed background.

DTSC RESPONSE

The commenter again states that DTSC does not properly include all waste constituents from OB/OD operations in the draft permit and requests that it be revised to do so.

Environmental monitoring requirements listed under the sections referenced again do not refer to miscellaneous units. However, in regards to background soil concentrations, the environmental performance standards under 22 CCR, Chapter 14, Article 16, §66264.601 includes "prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents, hazardous constituents, or reaction products, in surface water, or wetlands or on the soil surface considering, the existing quality of surface waters and surface soils, including other sources of pollution and contamination and their cumulative impact on surface waters and surface soils."

Hazardous constituents will be included in the DTSC environmental monitoring program submitted by Edwards. Please see response to comment #25.

COMMENT #31

I petition that this C3PM be rewritten and the Permittee required to provide compliant environmental monitoring and that DTSC deny any expansion until the following activities are undertaken, at a minimum:

- Do a CEQA assessment of all of the impacts, such as airborne emission deposition and accumulation, using a comprehensive site-conceptual model,

- Spelling out the exact chemical names being authorized for the public ---not JUST reciting the EPA/California Waste codes,

- Making specific changes to the environmental monitoring conditions, etc. to bring them into compliance with Title 22 CCR, and

- Re-notice the Class 3 Permit Modification

Thank you for your consideration.

DTSC RESPONSE

Comment Noted.

Attachment A

Response to Comments from Previous Public Comment Period and Hearing

DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC)
RESPONSES TO 2013 PUBLIC COMMENTS ON
DRAFT CLASS III PERMIT MODIFICATION FOR
EDWARDS AIR FORCE BASE (EAFB)
EDWARDS, CA 93524
EPA ID: CA1570024504

Comment #1

Philip B. Chandler
4501 W. Channel Islands Blvd., # 86
Oxnard, CA 93035
E-mail, received October 14, 2013

Comments	Responses
ENVIRONMENTAL MONITORING	
1a. Why does Part III.4 ENVIRONMENTAL MONITORING say "Not applicable."?	1a. Environmental monitoring requirements for the OB/OD units are listed under the Unit Specific and Special Conditions in the draft permit. Part III.4 of the draft permit applies to "Regulated Units" defined under Title 22 Section 66260.10. The draft Permit does not contain any units that are defined as such. A unit performing open burning, open detonation of explosive wastes is specifically enumerated as a miscellaneous unit (52 Fed. Reg. 46946, 46952 (12/10/87)). An open burning/open detonation (OB/OD) unit is one of the most common miscellaneous units (OSWER 948 9.00-2 (4/22/87)). As such, Article 16 is the applicable regulation. Article 17, which many of your comments appear to assume govern these units, is not applicable.
1b. Under Article 17, the environmental protection standard (EPS), shall consist of the list of hazardous constituents (Title 22 CCR §66264.703), concentration limits (Title 22 CCR §66264.704), and the monitoring points (Title 22 CCR §66264.705). [Title 22 CCR §66264.702]. Is Table 4.3-3 Chemicals of Concern Evaluated in the Health Risk Assessment in the draft EIR intended to represent this required list of hazardous constituents for air?	1b. Table 4.3-3 is a list of COC's that were analyzed in the HRA because they are known to pose health concerns and may be emitted directly or indirectly from OB/OD events. The list is not intended to fulfill any requirements under Article 17.
1c. In addition to sampling requirements specified in the Permittee's AVAQMD permit(s), the Permittee should also be required to monitor for airborne emission deposition/accumulation of the emitted hazardous constituents. Simply addressing airborne toxic air contaminants is not sufficient. Long-term particulate deposition and accumulation must be addressed in the Permit's monitoring program.	1c. Comment Noted. The Permit requires Edwards to submit workplans for environmental monitoring 3 months from the effective date of the addition of the OB/OD Units to the permit.

1d. The permit statement should include the phrase "and all subsequent revisions thereto" with reference to any AVAQMD or other documents being incorporated by reference.	1d. Comment Noted.
1e. The draft EIR states that "...the proposed project would not significantly impact the geology or cumulative soil resources in the area." It does admit that "...the levels of some toxic contaminants in the soil might increase." It then states that '...monitoring as a condition of the Permit will ensure that soil contamination does not become significant." This would require a soil monitoring and response plan under Article 17. Is this what is being referred to?	1e. No. The statement from the draft EIR refers to a condition in the draft permit, which states - The Permittee shall implement DTSC-approved environmental monitoring programs, including sampling, analysis, statistical and trend analysis for soil, ecological receptors, groundwater, and other media as specified by DTSC. The plan for the monitoring programs shall include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk to any media. The statement is not referring to any requirements under Article 17.
1f. DTSC argues that "...given the large land area occupied by Edwards, the impacts of potential toxic contamination of the soil from the project is cumulatively insignificant." and that "There will be no regional change to soil characteristics or quality." A thin layer---millimeters---of waste constituents spread across the emission footprint might in fact have significant cumulative impact. Please address this. Moreover, the sampling upon which the cumulative impact statement is based needs to be addressed with regard to the airborne deposition/accumulation mechanisms. Specifically, the soil sampling that was done, and upon which these conclusions seem to rely, must match the thin nature of airborne deposition. Thin-skin surficial sampling must have been done---not the normal 1-foot or even 6-inch samples. Please address the sampling methods that provided the data utilized for both draft Permit Modification and draft EIR.	1f. Again, the draft permit requires the implementation of a DTSC-approved environmental monitoring program for soil. The plan for the monitoring programs shall include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk. Several soil investigations have been undertaken at both previous and current OB/OD locations. The investigations involved samples from a variety of depths ranging from the top 0 to2 inches of the surface to 7.5 feet below ground surface.
1g. Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for air for the regulated unit. That program should include deposition monitoring.	1g. Requirements under section 66264.701(a) do not apply to the OB/OD units. The OB/OD units are defined as miscellaneous units and are regulated under Article 16.
1h. Under Unit 2 (OD), it is stated that "...the Permittee shall implement DTSC-approved environmental monitoring programs, including sampling, analysis, statistical and trend analysis for soil, ecological receptors, groundwater, and other media as specified	1h. Requirements under Article 17 section 66264.701(a) do not apply to the OB/OD units. The OB/OD units are defined as miscellaneous units and are regulated under Article 16.

by DTSC. The plan for the monitoring programs shall include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk to any media. This condition shall be met in accordance with Part V. Special Condition 2." This does not satisfy the requirements under Under Article 17 to specify in the Permit a soil monitoring and response program (SMRP). Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for various media for the regulated unit including soil. Please revise the draft permit to include the required monitoring program. DTSC should also include "thin-skin" soil sampling to supplement the shorter period wet and dry deposition monitoring that should be done under an AMRP. This comment also applies to Unit 3 (OB)--- Explosive Ordnance Disposal Range Open Burn (OB) Unit.	
1i. Under Unit 2 (OD), it is stated that, " Two years after the effective date of addition of the OD Unit to the Permit, and every two years thereafter, the Permittee shall submit a report for DTSC's approval on the efforts on the part of the Permittee to identify, evaluate, and test methods of sampling air emissions from OD events." This does not satisfy the requirements of Article 17 to specify an air monitoring and response program (AMRP). Two years to mess around and sort out the monitoring? Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for various media for the regulated unit including for air. Please revise the draft permit to include the required monitoring program now not in two years. DTSC should include wet and dry deposition monitoring that under the AMRP. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.	1i. This requirement for the OB and OD unit will be changed to state "Within one year after the effective date of the addition of the OB/OD Unit to the Permit, and every two years thereafter, the Permittee shall submit a report for DTSC's approval on the efforts on the part of the Permittee to identify, evaluate, and test methods of sampling air emissions from OB/OD events. The report shall include a certification that the information is the best and most current information available to the Permittee. This condition shall be met in accordance with Part V. Special Condition 4." This change will make the conditions consistent with the requirement in Part V. Special Condition 4. Requirements under Article 17 section 66264.701(a) do not apply to the OB/OD units. The OB/OD units are defined as miscellaneous units and are regulated under Article 16.
1j. Under Unit 2 (OD) it is stated that "Treatment residues in soil shall not exhibit a hazardous waste characteristic as defined by Title 22, Cal. Code Regs. Division 4.5, Chapter 11." While this is nice, it does not appear to satisfy the need for specifying concentration limits under Title 22 CCR §66264.704. Please revise the draft Permit to include concentration limits for each COC. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.	1j. Requirements under section 66264.704 do not apply to the OB/OD units. The OB/OD units are defined as miscellaneous units and are regulated under Article 16.

1k. Under Unit 2 (OD) is stated "14. The annual quantity for OD and OB combined shall not cause a noncarcinogenic chronic hazard index of 1.0 to be exceeded at any offsite location, as calculated in the approved Human Health Risk Assessment." and "15. The event quantity for OD shall not cause an acute hazard index of 1.0 to be exceeded at any offsite location, as calculated in the approved Human Health Risk Assessment." These are quite nice in their way but depend on a HRA that may be flawed from not considering ALL of the waste codes being authorized and certainly not considering the airborne emission deposition/accumulation. Yes, I am aware that the USEPA/CARB/AQMD(various of them) basic models have deposition elements----however DTSC's work at Exide and Quemetco secondary lead smelters has demonstrated that such modeling does not adequately predict deposition/accumulation---- otherwise why have hazardous levels of lead been found outside the facilities that confounded DTSC/SCAQMD's modeling? Please improve this requirement such that it is independent of a retrospective HRA. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.	1k. Comment Noted.
<u>COCS/AUTHORIZED WASTE CODES</u>	
1l. The draft Permit states under Unit 1, that the "...RCRA hazardous waste codes are listed in Appendix 11a of the RCRA Part B Permit Renewal Application, Hazardous Waste Support Facility, December 2004, and are included here in Appendix A." Are these the codes also being authorized under this modification and from which the COCs are drawn? Is this HRA for all units, and not just the OB/OD units? Are there just two waste codes being authorized for the OB/OD units ----just D001 and D003 as cited in the Explosive Ordnance Disposal Range Open Detonation (OD) Unit and the Explosive Ordnance Disposal Range Open Burn (OB) Unit. Something seems odd here.	1l. Unit 1 is the Hazardous Waste Support Facility (HWSF). It is used strictly for the storage of hazardous waste. The draft permit states – "The unit serves as central point for the collection of a full range of hazardous wastes (acids, caustics, batteries, oxidizers, solvents, plastics, resins, etc.), generated base-wide. Hazardous waste is stored in 55-gallon drums and other Department of Transportation-approved containers." This unit is part of the permit that was issued by DTSC and became effective 11/7/2005. The waste codes for this unit are listed in Appendix 11a and 11b. These waste codes were included in the permit when the permit was issued in 2005 and are not part of this Class III permit modification. The purpose of the EDWARDS AIR FORCE BASE PRECISION IMPACT RANGE AREA OPEN BURN/OPEN DETONATION HEALTH RISK ASSESSMENT (January 2012) was to evaluate the potential human health risk impacts associated with the emissions of chemicals-of-concern (COCs) into the surrounding environment from the OB/OD Units. This HRA does not evaluate the potential

	health risks associated with the HWSF. There are only two waste codes authorized in the draft permit for the OB/OD units – D001 and D003 are for Ignitable and Reactive hazardous waste, respectively.
1m. Are additional waste codes and constituents being authorized in this modification over and above those that have been allowed under the 1993 Stipulation and Order? If they are, how have they been handled in the development of the HRA?	1m. The waste codes requested by Edwards as part of this permit modification to be treated by OB/OD are D001 and D003. The Stipulation and Order allowed Edwards to treat wastes with waste code D003. All waste constituents from all authorized codes are handled as appropriate to DTSC guidelines in the HRA.
1n. It is believed that under DTSC's regulations, in particular title 22 CCR §66264.93, the COCs shall be all waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste associated with the authorized units. Please indicate if this is what the HRA was developed to match?	1n. Title 22 CCR §66264.93 is under Article 6 - Water Quality Monitoring and Response Programs for Permitted Facilities. Regulations in this article apply to miscellaneous units when necessary to comply with sections 66264.601 through 66264.603 of article 16. The EDWARDS AIR FORCE BASE PRECISION IMPACT RANGE AREA OPEN BURN/OPEN DETONATION HEALTH RISK ASSESSMENT (January 2012) is not intended to match any requirements under Article 6.
<u>HEALTH RISK ASSESSEMENT</u>	
1o. It is stated in the draft EIR that the 2012 HRA estimated ground-level concentrations for toxic air contaminants at the maximum point of exposure and that concentrations were calculated for treatment of the energetics as well as entrainment of dust from the crater caused by detonation, ash handling, fugitive dust from grading, and dust and ash from wind erosion. Did the HRA address the surficial deposition/accumulation of particulates containing the waste constituents? If so, how?	1o.Yes, the HRA addresses the superficial deposition/accumulation of particulates containing waste constituents. Section 4.4.1, Model Selection, explains that Ground Level Concentrations (GLCs) for COCs resulting from OB/OD operations were determined from air dispersion modeling which followed the practices specified in OEHHA guidelines. The guidelines are consistent with the Guide on Air Quality Monitoring (USEPA 2005a) Title 40 Code of Federal Regulations 51 Appendix W, and incorporated portions of the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP, USEPA 2005b). Section 4.5, Multipathway Analysis explains the human exposure to emissions from OB/OD operations via inhalation, soil ingestion, dermal contact and Mother's Milk ingestion pathways.
1p. The "retrospective" DTSC approach to HRAs and the frequently "prospective" RCRA and California-only	1p.This question is somewhat confusing. Mr. Chandler asks "...did the HRA cited in the draft EIR

waste code authorizations seem to present an inconsistency at many DTSC sites. Although Table 4.3-3 of the draft EIR seems quite impressive, did the HRA cited in the draft EIR take into consideration the specific hazardous wastes, hazardous waste constituents, and degradation products of ALL the waste codes for which it is authorizing the Air Force? If not, please explain why not---not just in a practical sense but in a statutory and regulatory fashions as well (with the appropriate supporting citations).	take into consideration the specific hazardous wastes, hazardous waste constituents, and degradation products of ALL waste codes for which it is authorizing the Air Force?" If this question refers to all the categories of materials to be processed by OB/OD, then the answer is yes. Extensive research has been conducted (at this facility and many others) concerning, not only the raw constituents of the wastes but also their degradation products, notably the potential for some categories to form dioxins and dibenzofurans.
1q. Toxic air contaminant concentrations for crater dust, grading, and windblown dust were based on soil concentration data from sampling conducted at AFRL and on the PIRA as part of the Edwards AFB Installation Restoration. It is noted that the PIRA samples cited are from the former PIRA OB/OD Unit (Site 270) that was operational up to the early 1990s and is now inactive---in other words, this appears to be retrospective. Please explain how the dust data was obtained and what the airborne emission depositions were estimated to be.	1q. It is true that the use of data for concentrations of metals, organic and inorganic compounds in the soil from sampling conducted at AFRL and PIRA is a retrospective approach (sampling events were conducted in 1999, 2003, and 2007). It is not clear why this is a concern. The approach is valid because the native and anthropogenic compounds in the soil are not believed to have changed since the sampling events took place. Appendix B of the HRA details the calculations for the fugitive dust emissions and explains the specific methodologies available from CARB that were used in the analysis: agricultural land preparation (grading, CARB, 2003) and wind-blown dust (unpaved roads scenario, CARB, 1997).

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Comment #2

Ms. Joycelyn Padilla 19703 E. Avenue G Hi Vista, CA Comment Card, received at Public Hearing September 17, 2013	
Comments	Responses
2a. How far does the contamination travel by air?	2a. Contamination, and by this DTSC infers that you mean the toxic constituents of Open Burn/Open Detonation operations, can travel quite far by air. The primary issue is: what are the concentrations of toxic compounds that travel off of the site and might expose a member of the public. The protocols for OB/OD events at Edwards Air Force Base are designed to severely limit the concentrations of toxic compounds that travel in the air from the spot used to burn or detonate them. For example, no OB/OD operations are permitted when wind speeds exceed 15 mph. A tracking inventory system insures that the amount of waste materials of all different categories that are permitted to be processed will result in an excess cancer risk of less than one in one million and a noncancer health impact of less 1.0, at the fenceline of the Air Force base for the nearest maximally exposed person. These are considered safe levels. Exposures beyond the fenceline of the base would be considerably less.

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Comment #3

Carolyn Barber 46408 North 172nd Street East Lancaster, California 93535 Oral Comments, received at Public Hearing on September 17, 2013	
Comments	Responses
3a. But anyway, I have seven windows that are broken. They are double pane, so all I did with the downstairs ones was take one pane out. I never reported it, because I worked at Edwards for 17 years. I have a loyalty thing to them. I always figured Edwards can get away with just about anything. Well, now we're getting down to no. You're going to increase the noise level? It's already bad. It's ridiculous. If it's breaking windows, how can it be -- and you're going to put more out there? I got 40 panels of -- what do they call it? Solar panels. You increase that noise level, my solar panels are going to start breaking. They cost me a fortune.	3a. A noise assessment was completed for the OB/OD units in 2006. The authors concluded that detonation of ordnance up to 2,000 pounds during optimum weather conditions would yield sound levels that have a low possibility of producing complaints and would not result in a significant impact. The draft Permit contains a condition that states the following - The event quantity for OD shall not cause peak sound levels to exceed 130 dB at any offsite location, as demonstrated by a DTSC-approved noise analysis or noise measurements collected by methods approved by DTSC.
3b. And the water level. Oh. That water is never going to go anywhere. That's caliche, which is called sand/concrete. Caliche is an Indian word for sand/concrete. And that water that lands on that Edwards Air Force Base, it's there damn near forever. You can go a month after it rains and you'll still see puddles. You know. It's not going anywhere. That's hazardous.	3b. Comment Noted.

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Comment #4

Mr. Ron Tice 47566 120th Street East Lancaster, California Oral Comments, received at Public Hearing on September 17, 2013	
Comments	Responses
4a. You talking about igniting or incinerating, whatever, on this 2,000 pounds per event two times a month. But you want to increase it to 150,000 pounds. You going to inform anybody of that, or how is that going to change anything? That's three times the amount.	4a. The 2,000 pound limit requested by Edwards is for each open burn or detonation event. The 150,000 pound limit is an annual limit. The purpose of the public notice, the 60 day comment period, and public hearing was to inform the public regarding Edwards request to allow them to treat these amounts of Hazardous waste by open burn or open detonation.
4b.Then you also said this is generated onsite. You said something about land mines and grenades. They use them out there? This just the Air Force, or is the Army involved? Marine Corps? Navy? They're all for disposal? Because, you know, Fort Irwin is a pretty good size fort, too.	4b. DTSC does not choose the waste streams for a facility. The facility chooses the waste streams to manage and requests a permit from DTSC for authorization. DTSC does not dictate which branch of the US military can treat which munitions.

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Comment #5

Mr. Cornell Tribne
47564 120th Street East,
Lancaster, California 93535
Oral Comments, received at Public Hearing on September 17, 2013
E-mail, received on September 13, 2013

Comments	Responses
Oral Comments	
5a. I think one of the things we need to do here, too, as a community is do we want this in our backyards. Personally, I say no. The reason why I say no is because any little hazardous material is bad. Now we're looking at larger hazardous material. Hazardous material of any kind affects environment, affects your water supply, affects your ground table, affects you as a person. Don't let anyone tell you it doesn't. If it didn't, they wouldn't call it hazardous. So I'm against it. I haven't heard anybody say this. There's still a lot of questions up in the air that I'm sure we all have concerns with that need to be addressed. Mr. Coe has been very nice to address some of the issues that I had, and I will be in contact with him on further applications that the military would like to do. If it's hard for us to get a window replaced, can you imagine how hard it would be to try to get some kind of straight answers pertaining to your health?	5a. Comment Noted.
5b. There's a lot of EPA guidelines and policies and procedures, SOPs, SPMs, that the military should abide by, but it's going to take people to oversee the military to make sure that these things happen. We cannot be naive about this.	5b. Comment Noted.
5c. Another thing that we need to think about, too, is once these hazardous materials -- may they be chemical, liquid, explosives -- they leave a resonance. Where does the resonance go? How is it contained? Is it labeled? Who takes the samples on	5c. Comment noted. Edwards tests a sample of the waste ash generated from OB/OD treatment events from OB/OD for corrisivity, and toxicity characteristics. If the tests show that the ash is hazardous, it is appropriately labeled and stored in

these things? Who's going to maintain the running log? Are we going to have access to these logs? So we need to look at the monitoring and inspection procedures to assure the controls of these contaminant systems are working properly, and they are not affecting our health or our animals' health, and our land. I love the desert out here. I even like the snakes, as long as they stay to a distance.	drums at the Hazardous Waste Storage Facility on-site and transported offsite for treatment and disposal. Edwards will maintain a copy of all waste analysis data for at least three years from the date the ash residue is sent-offsite. This data must be made available to DTSC upon request.
5d. Okay. We know that the military is maintaining the magazines. These magazines that they are going to use, how long have they been in use for the materials that they are already burning?	5d. It is not clear what magazines you are referring to. Most munitions that are to be treated by OB/OD come from the Munitions Storage Area (MSA) on base. The MSA is not regulated by DTSC.
5e. Anything that's burned is going to go in the atmosphere. Anything that goes in the atmosphere deals with the ozone layer. Anything that deals with the ozone layer deals with health risks.	5e.Comment noted.
5f. I'd like to know myself the construction of the magazines. Who built them? How old are they? Are they in reinforced concrete structures? Steel? Arches with steel doors that are kept closed when not being accessed? What about the ventilation system? What about the ventilation system that would notify the military, as well as ourselves, that an emergency has taken effect?	5f. It is not clear what "magazines" you are referring to. Most munitions that are to be treated by OB/OD come from the Munitions Storage Area (MSA) located on base. The MSA is not regulated by DTSC. The construction details of the MSA and its ventilation system is not information required by DTSC to issue a hazardous waste permit.
<u>Email</u> ----- Original E-mail Message ----- ********** *Mr. Cole/Sir* *My name is Cornell Tribne I recieved a letter pertaining to the above permit modification for Edwards Air Force Base! I have many concerns for the expasion of this program, for I have a ranch an have to depend on my water supply which is a underground well. This water not only supply water to my home for me to lived but also for my animals an future crops an fruit trees. Sir as we know when you are dealing with Haz Materials of any sort it is a risk factor, that is always present, an with this proposed expasion it makes this risk factor even greater! The poison that will be released into the air and ground is not good for the residents an farmers that live here! The health risk*	

of any chemicals no matter how small presents a health risk. Sir I do tho have a few questions if you would be so kind to answer for me?	
5g. Is their a S.O.P./S.P.M an a (UXO) in writing for an emergency response cilvilian/military specialist to control for any emergency event?	5g. Standard Operating Procedures (SOP) for the Explosive Ordnance and Disposal (EOD) range are found in Edwards AFB EOD Operating Instruction (OI) 91-4. This OI is Appendix 19 of the RCRA Subpart X Permit Application for the Explosive Ordnance and Disposal Range at Edwards Air Force Base. Emergency procedures for the EOD range are contained in Appendix 6. Appendix 6 is titled Contingency Plan for the Hazardous Waste Support Facility and the Explosive Ordnance Range at Edwards Air Force base. This contingency plan is required under CCR Title 22 Division 4.5 Chapter 14 Article 4 Section 66264.51. The Contingency plan outlines the procedures, equipment, and personnel for responding to emergencies at the EOD range.
5h.Is their a Log that is kept pertaining to the actions an materils that will be subject to your proposed Hazardous Waste an (UXO) Procedures an if so who will maintain this log books, event notes ect?	5h. The Draft Permit contains a special condition for the OB and OD units, which states the following: The quantity of hazardous waste and the date of the treatment event shall be recorded in a format designed to document that the maximum event and annual treatment quantity limits have not been exceeded. Edwards maintains a written operating record for the OB/OD units that includes the date of receipt for treatment for each load of waste received, a description and quantity of each energetic waste treated at the EOD Range, and the method(s)and date(s) of its treatment, copies of applicable hazardous waste profiles, all records and results of ash waste analyses performed in accordance with the WAP, all summary reports of incidents when contingency plan measures were implemented; and all records and results of inspections conducted at the EOD Range. Also, by March 1st of each year, Edwards prepares an annual report with descriptions of the type and quantity of each hazardous waste treated at the EOD Range during the previous calendar year. The report includes a tracking log to demonstrate compliance with the Health Risk Assessment treatment limits, the method of treatment of each hazardous waste, a description of efforts undertaken to reduce volume and toxicity of wastes generated, and a description of

	changes in the volume and toxicity of waste achieved in current year versus prior years.
5i. How long is the log books, notes, records kept/maintain?	5i. The operating record is maintained until closure of the EOD Range. Other records are maintained for a minimum of three years.
5j. Will the public have access to this information an the chemicals that will be under this proposed hazardous waste modification ,also will we be kept informed as a community of the type of chemicals this waste facility will be in contact with?	5j. Yes. Appendix 17 of the RCRA Subpart X Permit Application for the Explosive Ordnance and Disposal Range at Edwards Air Force Base contains the general chemical compositions of the propellants and explosives in munitions that are to be treated by either OB/OD. The material is available as part of the administrative record for this permit and can be found at Department of Toxic Substances Control File Room 8800 Cal Center Drive Sacramento, CA 95826
5k. What is the risk factor of transportion these chemicals to the base?	5k. Hazardous Wastes generated at Edwards that are to be treated by either open burn or open detonation are prohibited from being transported outside the base boundary.
5l. How will the chemicals be transported by truck, plane, ect?	5l. Military personnel use pickup trucks, flatbed trucks, and flatbed tractor trailers to transport waste to the EOD range. No planes are involved with OB/OD operations.
5m. Is their a manifest in the case of any emergencies an if so knowing now that the base is already engaged on a so call small scale dealing in haz/waste can we have a copy of any logs, manifest of any problems that may have occured say in the last three to four years? *Sir I do have several other concerns but I hope to get a response on the above questions!! my e-mail is tribne1@sbcglobal.net Thank You Sincerely C. Tribne*	5m. In the event of a release of hazardous waste or public endangerment occurs, Edwards is required to notify DTSC. The Draft Permit contains the following condition: In the event that the Permittee identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new Solid Waste Management Units (SWMUs) not previously identified, the Permittee shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings, including the immediacy and magnitude of any potential threat to human health and/or the environment.

	Edwards also includes in their operating log all summary reports of incidents when contingency plan measures were implemented. DTSC has not been notified of any emergencies at Edwards, which involved implementing their contingency plan in the last three to four years.

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Comment #6

Mr. Jerrel Dollahite jdainthome@yahoo.com E-mail, received August 15, 2013	
Comments	Responses
6a. ----- Original E-mail Message ----- ********** *In regards to The department of Toxic Substance Control* *This letter is on the behalf of the citizens living in the Hi vista area the ends of La county and beginning of Kern county. We are very much Concerned of the hazards waste dumping on the end of the county road. We are not fine with it and wished you find anthor spot to dump your Toxic. WE as neighboring citizens don't agree in the dumping site you have chosen and if there is any way we can move the site from our neighboring area we will do what we can to speak and reach out against it. All it will do is contaminate our water supply and air. We have small children and elderly that we take care of off the water supply we have. We understand it is all county land but we are the surrounding neighbors and, "Don't want that Waste in our Face".* *Sincerely Concerned Citizen*	6a. DTSC appreciates your concern. However, we would we need more information about the "waste dumping at the end of the county road" you stated in your e-mail. The public notice regarding the class III permit modification we mailed out was for the open burning and detonation of hazardous wastes at Edwards Air Force Base. The burning and detonation takes place within the base boundary. DTSC is not permitting any dump site on county land. If you have more information regarding this potentially illegal activity please e-mail so we may take the appropriate action.

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Comment #7

Mr. Michael Hammil 45615 140th Street East, Lancaster, California 93535 Letter, received October 10, 2013	
Comments	Responses
7a. ----- Original letter ----- ********** *In regards to The department of Toxic Substance Control* *This letter is on the behalf of the citizens living in the Hi vista area the ends of La county and beginning of Kern county. We are very much Concerned of the hazards waste dumping on the end of the county road. We are not fine with it and wished you find anthor spot to dump your Toxic. WE as neighboring citizens don't agree in the dumping site you have chosen and if there is any way we can move the site from our neighboring area we will do what we can to speak and reach out against it. All it will do is contaminate our water supply and air. We have small children and elderly that we take care of off the water supply we have. We understand it is all county land but we are the surrounding neighbors and, "Don't want that Waste in our Face".* *Sincerely Concerned Citizen*	7a. DTSC appreciates your concern. However, we would we need more information about the "waste dumping at the end of the county road" you stated in your e-mail. The public notice regarding the class III permit modification we mailed out was for the open burning and detonation of hazardous wastes at Edwards Air Force Base. The burning and detonation takes place within the base boundary. DTSC is not permitting any dump site on county land. If you have more information regarding this potentially illegal activity please e-mail so we may take the appropriate action.
7b. *Dear Mr. Sam Coe, Project Manager* *Sir,* *I do not live in the High Vista Area but live on 140th St. E. near Ave. H.* *My only concern with this project is that I have a well and depend on this for all my water needs.* *As long as the underground water is not contaminated I don't have a problem.* *Thank you for your time* *Michael Hamill* **********	7b. The draft Permit contains a condition that requires Edwards to implement DTSC-approved environmental monitoring programs for groundwater and other media as specified by DTSC. The plan for the monitoring programs shall include actions that will be taken in the event monitoring results demonstrate an increase of contamination or risk to any media.

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Comment #8

Mr. Glen E. Stephens Eastern Kern Air Pollution Control District 2700 M Street Suite 302, Bakersfield, California 93301-2370 Letter, received October 2, 2013	
Comments	Responses
8a. ----- Original letter ----- ********** SUBJECT: Proposed Hazardous Waste Facility Permit Modification for Edwards Air Force Base Dear Mr. Coe: The Eastern Kern Air Pollution Control District (District) acknowledges receipt of the Proposed Hazardous Waste Facility Permit Modification Draft EIR for Edwards Air Force Base Open Burn/Open Detonation Units (OB/OD). Thank you for providing a copy of this report to the District. Information provided in your draft EIR address open burn/open detonation requirements of District Rule 416, Open Burning, which include approved District burn plans and permitting requirements. Your draft EIR also includes sections that cover state and federal air quality standards including environmental impact significance pursuant to CEQA. The District has no comments at this time. Should you have any questions feel free to contact Jeremiah Cravens, Air Quality Specialist II at (661) 862-5250 or Cravensj@co.kern.ca.us. Sincerely, Glen E. Stephens, P.E. Air Pollution Control Officer	8a. Your letter is noted.

Attachment B

Letter and E-mail Comments Received

Eastern Kern
Air Pollution Control District

Glen E. Stephens, P.E.
Air Pollution Control Officer

August 21, 2014

Mr. Sam Coe
Project Manager
8800 Cal Center Drive
Sacramento, CA 95826

SUBJECT: Re-notification of Proposed Hazardous Waste Facility Permit Modification for Edwards Air Force Base

Dear Mr. Coe:

The Eastern Kern Air Pollution Control District (District) acknowledges the receipt of the Proposed Hazardous Waste Facility Permit Modification Draft EIR for Edwards Air Force Base Open Burn/Open Detonation Units (OB/OD).

The District does not have any additional comments other than those made in sriting on September 26, 2013.

Should you have any questions, please telephone Cherita Young, Air Quality Engineer I, of our office at (661) 862-5250.

Sincerely,

Glen E. Stephens, P.E.
Air Pollution Control Officer

GES:CY:tf

Enclosures

Desert Citizens Against Pollutioin

Post Office Box 845 * Rosamond, CA 93560

661-256-2101 * dcapjane@aol.com

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,

Jane Williams

Executive Director

Desert Citizens Against Pollution

dcapjane@aol.com

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Lahontan Regional Water Quality Control Board

August 20, 2014

File: Environmental Doc Review
Kern County

Sam Coe, DTSC
8800 Cal Center Drive
Sacramento, CA 95826

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT FOR EDWARDS AIR FORCE BASE OPEN BURN/OPEN DETONATION UNITS, KERN COUNTY, STATE CLEARINGHOUSE NO. 2003111120

California Regional Water Quality Control Board, Lahontan Region (Water Board) staff received the Draft Environmental Impact Report/Environmental Assessment (DEIR/DEA) on August 5, 2013, which was prepared for the Edwards Air Force Base (Edwards) Open Burn/Open Detonation (OB/OD) Units Project (Project) by the California Department of Toxic Substances Control and submitted in compliance with provisions of the California Environmental Quality Act (CEQA) and National Environmental Policy Act. The purpose of the Project is to modify the existing Class 3 Hazardous Waste Facility Permit to allow Edwards to continue to treat reactive hazardous waste by OB/OD, consolidate treatment activities at the Explosive Ordnance Disposal Range, and expand beyond those currently authorized.

Waste generated from OB treatment will be transported to the on base permitted Hazardous Waste Support Facility. When OB/OD is discontinued the former units will be closed after all waste has been removed, structures have been decontaminated, and any contaminated soils are removed. If it is not possible to remove all the contaminated materials or soils from the site, the Closure Plan will be amended as necessary.

Based on the project description, the Water Board provides the following comments.

1. Water Board staff understands from the DEIR/DEA that no modification of existing drainages will occur during operations. We request natural drainage patterns be maintained during the duration of site activities.
2. Water Board staff understands that any waste removed from the OB/OD units will be disposed of at the on base permitted facility only.

If you have any questions, please call me at (760) 241-4942 or by email at ShannonM.Utley@waterboards.ca.gov or Cindi Mitton, Senior Engineer at (760) 241-7413.

Shannon Utley
Engineering Geologist

R:\RB6\RB6Victorville\Shared\Units\CINDI UNIT\Utley\EAFB_EIR_EA

Permit Appeals Officer
Dept. of Toxic Substances Control
8800 Cal Center Drive, 2nd floor
Sacramento, California 95826-0806

ADMINISTRATIVE APPEAL OF DECISION ON APPROVAL OF FINAL RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), CLASS 3 PERMIT MODIFICATION FOR THE EDWARDS AIR FORCE BASE FACILITY RCRA-EQUIVALENT PERMIT, LOS ANGELES COUNTY, CALIFORNIA [EPA ID NO. CA157002504]

Attention Appeals Officer:

This is a petition for review of the March 7, 2014, decision to approve and issue a Class 3 Hazardous Waste Permit modification for the Edwards Air Force Base (Edwards AFB), California 93524 RCRA-equivalent permit.

In the Fact Sheet, it is stated that Edwards currently treats reactive hazardous wastes through Open Burning and Open Detonation (OB/OD) under the authority of a Stipulation and Order, pending DTSC's decision on the Modification request. It is further stated that if the Modification is granted, it would allow Edwards to continue to treat reactive hazardous wastes under a Resource Conservation and Recovery Act (RCRA) hazardous waste permit in place of the Stipulation and Order. It would allow Edwards to **continue to treat** reactive hazardous waste by OB/OD, to consolidate these treatment activities to the existing OB/OD units, and to expand operations by treating more waste than currently authorized. The types of waste treated include various propellants, unserviceable munitions and ordnance containing pyrotechnics, explosives, munitions casings, containers, and other materials contaminated with explosives. A January 19, 1993 Stipulation and Order has allowed for operation of the OB/OD units until DTSC makes a hazardous waste facility permit determination. I made only a few brief comments dealing with environmental monitoring,

COCs/Authorized waste codes, and the HRA. DTSC ignored these and provided a wholly inadequate response.

The OB/OD unit is essentially an open-air hazardous waste incinerator. DTSC utilizes the miscellaneous unit regulations to govern it---in large measure to avoid the title and quite restrictive hazardous waste incinerator regulations. In any event, however, the hazardous waste incinerator regulations as well as many other regulations covering specific types of units can be applied because of the way the miscellaneous unit regulations were written. Miscellaneous units are a hodge-podge---from smelting kettles to filter presses, and therefore its regulations were written to allow use of most of the other unit-specific regulations. DTSC has failed to do this with the Class 3 permit modification (C3PM). I therefore petition that DTSC go back and properly apply its own regulations to provide adequate protection for human health and the environment. At the same time it must re-visit its inadequate CEQA compliance.

More specifically:

1. DTSC actually cited CCR, 22, §66264.706(b) under Part III, Condition 4(A)(1)(d) of the draft Class 3 Permit Modification for Kettleman Hills Facility KHF), as the basis for requiring under state authority that KHF to provide for representative sampling of PCBs in the ambient air---- after decades of shirking implementation of its statutory and regulatory authorities with regard to air monitoring at its RCRA facilities. However, it fails to do the same with the Air Force and claims that it cannot do the same for the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and §66270 to include the appropriate specifications of environmental monitoring.

2. DTSC actually required an additional ambient air monitoring point in Part III, Condition 4(A)(1)(e) of the draft KHF Class 3 Permit Modification, as the basis for requiring under state authority. DTSC fails to do so for the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and provide for an air monitoring and response plan under Title 22 CCR §66264.706(b). Ambient air monitoring alone is an inadequate monitoring response

with respect to emissions from the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. Specifically, deposition and accumulation of airborne emissions is a major pathway to public exposure that DTSC is aware of but neglects, even at its most dangerous emitting sites such the Exide or Quemetco secondary lead smelters in Los Angeles. Edwards needs to be required to provide a program of deposition monitoring in outside the facility boundaries. Please note that deposition and accumulation of airborne lead emissions has been found 360^0 around the above-cited lead smelters so that even the proposed ambient air monitoring may not produce adequate representation.

3. DTSC fails to honor "Each permit issued must also include terms and conditions as the Department determines necessary to protect human health and the environment from hazardous waste treatment, storage and disposal related activities. (HSC Section 25200; Cal. Code Regs., title 22, section 66270.32.) DTSC clearly has some discretion in deciding whether to issue and, if so, how to condition issuance of a HWFP modification but it must also honor the above. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §§66264 and 66270.

4. The development of a Health Risk Assessment is normally required for a HWFP. DTSC typically fails to address airborne emissions deposition and accumulation in them. A corollary is that Title 22 CCR §66270.14(c) (6) (B) requires the Permittee to establish detection monitoring programs for **ALL** media, including air. Section 66264.701(a) requires the Permittee to conduct monitoring and response programs for various environmental media of the regulated unit, including air, pore-gas, and soil. DTSC has not adequately complied with the requirements of Title 22 CCR, Division 4.5, Chapter 14, articles 17 nor of Title 22 CCR §66270 et seq. for all environmental media at the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and provide for detection monitoring programs for accumulation in soil from the emissions and airborne deposition rates under Title 22 CCR §66264.706(b).

5. DTSC describes that the ambient air monitoring program at the real-live open-air hazardous waste incinerator aka OB/OD at Edwards will be

that to satisfy the local AQMDs. DTSC typically fails to use the waste codes that it proposes to authorize to develop the monitoring parameters. It claims that the program is designed to protect human health and the environment, assess releases of volatile organic compounds, semi-volatile compounds, metals, and particulates.
AQMD use of historic waste profiles and emission characterization to establish the list of monitoring parameters not match the waste codes being authorized by DTSC. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and provide for detection monitoring programs for accumulation in soil from the emissions and airborne deposition rates under Title 22 CCR §66264.706(b) of the authorized waste constituents and their daughter products.

6. DTSC fails to honor in the C3PM, that Title 22 CCR § 66264.704(a) states that DTSC "...will specify in the facility permit the hazardous constituents to which the environmental protection standard of §66264.702 applies." DTSC has not done this properly. It further states that "Constituents specified in the permit will be limited to constituents reasonably expected to be in or derived from waste contained in a regulated unit." Clearly the waste that is to be contained in the C3PM unit is the waste it is being permitted for. Emissions from single point in time, given all of the authorized waste codes, are not acceptable. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and specify the hazardous constituents under for the environmental protection standard Title 22 CCR §66264.704(a) of the authorized waste constituents and their daughter products.

7. Title 22 CCR §66264.704(a) states that "The facility **permit shall specify concentration limits** for soil, soil-pore gas, and open-air downwind from the regulated unit, for hazardous constituents established under section 66264.703." DTSC fails to do this when it simply including another agency's emissions permit. Such permits rarely suffice for all of the constituents covered by the RCRA waste codes that DTSC proposes to authorize. DTSC has not provided the required specification such that the public can reasonably discern it. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and specify the concentration limits hazardous

constituents under for the environmental protection standard Title 22 CCR §66264.704(a) of the authorized waste constituents and their daughter products.

8. Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for air for the regulated unit. DTSC should have required the Permittee to submit to DTSC, for review and approval, an Air Monitoring and Response Plan (AMRP) for the additional stations. This AMRP should have incorporated sampling procedures and analytical protocols that are in accordance with those needed for all chemicals in the proposed RCRA waste codes. This AMRP should have been included as an exhibit to the Operation Plan. Sampling procedures and analytical protocols shall be in accordance with ALL applicable guidance for both ambient air and deposition monitoring. I petition that DTSC revise the permit to meet the requirements of title 22, CCR, §66264 and require an AMRP for the real-live open-air hazardous waste incinerator aka OB/OD at Edwards

9. DTSC fails to address multi-media compliance inspections. The Permittee should also be required to comply with the results and recommendations of any Comprehensive Monitoring Evaluation (CME) to be conducted by DTSC with regard to air ---in particular airborne deposition and accumulation. I petition that DTSC revise the permit to address CMEs for airborne deposition and accumulation at the real-live open-air hazardous waste incinerator aka OB/OD at Edwards.
10. Hazardous waste constituents may be emitted into the ambient air from the real-live open-air hazardous waste incinerator aka OB/OD at Edwards. These airborne hazardous waste constituent emissions may deposit onto the land surface and accumulate as DTSC has established at the secondary lead smelters that it regulates in Los Angeles. Therefore, a monitoring and response program must be conducted for soil. [Title 22 CCR §66264.701 (a) and 66264.702(b)] In addition, the California Code of Regulations, title 22, section 66264.310(c) requires the Permittee to prevent lateral migration of **waste, gas, and vapor from the C3PM unit**. Deposition and accumulation of airborne landfill emissions clearly

represents a form of "lateral migration" of waste. Title 22 CCR, §66270.14(c) (6) (B) also **requires soil-pore gas monitoring.** I petition that a monitoring and response plan shall be included in the C3PM and shall include, at a minimum, the applicable elements of the California Code of Regulations, Title 22.

11. Concentration Limits for air, soil-pore gas and soil are described in Title 22, CCR §66264.704(a) which states "The **facility permit shall specify** concentration limits for **soil**, soil-pore gas, and open-air downwind from the regulated unit, for hazardous constituents established under §66264.703." [emphasis added] Title 22 CCR § 66264.704(b) states, in part, that "The concentration limit for a hazardous constituent in soil outside the regulated unit shall not exceed the background concentration of that constituent in the soil..." DTSC fails to do this. I petition that DTSC revise the C3PMto meet the requirements of title 22, CCR, §66264 and require that the concentration in soil outside the real-live open-air hazardous waste incinerator aka OB/OD at Edwards shall not exceed background.

I petition that this C3PM be rewritten and the Permittee required to provide compliant environmental monitoring and that DTSC deny any expansion until the following activities are undertaken, at a minimum:

- Do a CEQA assessment of all of the impacts, such as airborne emission deposition and accumulation, using a comprehensive site-conceptual model,

- Spelling out the exact chemical names being authorized for the public ---not **JUST** reciting the EPA/California Waste codes,

- Making specific changes to the environmental monitoring conditions, etc. to bring them into compliance with Title 22 CCR, and

- Re-notice the Class 3 Permit Modification

Thank you for your consideration.

Philip B. Chandler
4501 W. Channel Islands Blvd., # 86
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Oxnard (805) 382-3365
Topanga (310) 455-1962
Work (818) 717-6608
[philipbchandler@earthlink.net]

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TEJON
INDIAN TRIBE

15 August 2014

Mr. Sam Coe, Project Manager
California Department of Toxic Substances Control
Sacramento Field Office
8800 Cal Center Drive
Sacramento, CA 95826-3200

RE: Class 3 Hazardous Waste Facility Permit Modification and Draft Environmental Impact Report for the Edwards Air Force Base Open Burn/Open Detonation Units

Dear Mr. Coe,

First, please allow me to formally introduce myself. My name is Colin Rambo, and I was recently hired by the Tejon Indian Tribe (the Tribe) for the purpose of establishing their Tribal Historic Preservation Office. Further, the Tribe's Chairperson, Kathryn Montes Morgan, has delegated to me the authority to participate in any tribal consultation regarding cultural resources on behalf of the Tribe.

Secondly, thank you for the public notice, dated July 2014, informing the Tribe of the public availability and opportunity for comment on the proposed Class 3 Hazardous Waste Facility Permit Modification and Draft Environmental Impact Report (DEIR) for the Edwards Air Force Base (EAFB) Open Burn/Open Detonation Units (Project). The Tribe concurs with the findings of the DEIR prepared for the Project- which includes a summary of the previous cultural resource investigations that were reported in *Phase I Historic Properties Inventory for the Proposed Explosive Ordinance Disposal Range Relocation, Edwards AFB, Kern County, California* (EAFB 1995)- and has no conflicts with the Project.

Thank you for including the Tribe in the consultation process, and I look forward to working with your office in the future.

Respectfully,

Colin Rambo

Colin Rambo
Tribal Historic Preservation Technician
Tejon Indian Tribe
colin.rambo@tejontribe.net

Coe, Sam@DTSC

From: Jerrel Dollahite <jdainthome@yahoo.com>
Sent: Thursday, August 15, 2013 8:46 PM
To: Coe, Sam@DTSC
Cc: jerrel Dollahite
Subject: Proposed Hazardous waste permit
Attachments: Community notice.wps

In regards to The department of Toxic Substance Control

This letter is on the behalf of the citizens living in the Hi vista area the ends of La county and beginning of Kern county. We are very much Concerned of the hazards waste dumping on the end of the county road. We are not fine with it and wished you find anthor spot to dump your Toxic. WE as neighboring citizens don't agree in the dumping site you have chosen and if there is any way we can move the site from our neighboring area we will do what we can to speak and reach out against it. All it will do is contaminate our water supply and air. We have small children and elderly that we take care of off the water supply we have. We understand it is all county land but we are the surrounding neighbors and, "Don't want that Waste in our Face".

Sincerely Concerned Citizen

Coe, Sam@DTSC

From: cornell tribne <tribne1@sbcglobal.net>
Sent: Friday, September 13, 2013 1:02 AM
To: Coe, Sam@DTSC
Subject: proposed hazardous waste facility permit modification for Edwards Air Force Base

Mr. Cole/Sir

My name is Cornell Tribne I recieved a letter pertaining to the above permit modification for Edwards Air Force Base! I have many concerns for the expasion of this program, for I have a ranch an have to depend on my water supply which is a underground well. This water not only supply water to my home for me to lived but also for my animals an future crops an fruit trees. Sir as we know when you are dealing with Haz Materials of any sort it is a risk factor, that is always present, an with this proposed expasion it makes this risk factor even greater! The poison that will be released into the air and ground is not good for the residents an farmers that live here! The health risk of any chemicals no matter how small presents a health risk.Sir I do tho have a few questions if you would be so kind to answer for me?

1. Is their a S.O.P./S.P.M an a (UXO) in writing for an emergency response cilvilian/military specialist to control for any emergency event?
2. Is their a Log that is kept pertaining to the actions an materils that will be subject to your proposed Hazardous Waste an (UXO) Procedures an if so who will maintain this log books, event notes ect?
3. How long is the log books, notes, records kept/maintain?
4. Will the public have access to this information an the chemicals that will be under this proposed hazardous waste modification ,also will we be kept informed as a community of the type of chemicals this waste facility will be in contact with?
5. What is the risk factor of transportion these chemicals to the base?
6. How will the chemicals be transported by truck, plane, ect?
7. Is their a manifest in the case of any emergencies an if so knowing now that the base is already engaged on a so call small scale dealing in haz/waste can we have a copy of any logs, manifest of any problems that may have occured say in the last three to four years?

Sir I do have several other concerns but I hope to get a response on the above questions!! my e-mail is tribne1@sbcglobal.net Thank You Sincerely C. Tribne

Joycelyn Padilla

COMMENT CARD

Department of Toxic Substances Control
Public Meeting

19703 E. Avenue G.
Ht Vista, CA

How Far does the contamination travel by air?

Eastern Kern
Air Pollution Control District

Glen E. Stephens, P.E.
Air Pollution Control Officer

September 26, 2013

Mr. Sam Coe
Project Manager
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826

SUBJECT: Proposed Hazardous Waste Facility Permit Modification for Edwards Air Force Base

Dear Mr. Coe:

The Eastern Kern Air Pollution Control District (District) acknowledges receipt of the Proposed Hazardous Waste Facility Permit Modification Draft EIR for Edwards Air Force Base Open Burn/Open Detonation Units (OB/OD). Thank you for providing a copy of this report to the District.

Information provided in your draft EIR address open burn/open detonation requirements of District Rule 416, Open Burning, which include approved District burn plans and permitting requirements Your draft EIR also includes sections that cover state and federal air quality standards including environmental impact significance pursuant to CEQA. The District has no comments at this time.

Should you have any questions feel free to contact Jeremiah Cravens, Air Quality Specialist II at (661) 862-5250 or Cravensj@co.kern.ca.us.

Sincerely,

Glen E. Stephens, P.E.
Air Pollution Control Officer

GES: JC: db

45615 140TH ST. E.
LANCASTER, CA. 93535

SANTA CLARITA CA 913
08 OCT 2013 PM 7 L

USA
Equality
FOREVER

MR. SAM COE, PROJECT MANAGER
8800 CAL CENTER DRIVE
SACRAMENTO, CA. 95826

DTSC
RECEIVED
OCT 10 2013
SAC REGIONAL OFFICE
RASB

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In regards to The department of Toxic Substance Control

This letter is on the behalf of the citizens living in the Hi vista area the ends of La county and beginning of Kern county. We are very much Concerned of the hazards waste dumping on the end of the county road. We are not fine with it and wished you find anthor spot to dump your Toxic. WE as neighboring citizens don't agree in the dumping site you have chosen and if there is any way we can move the site from our neighboring area we will do what we can to speak and reach out against it. All it will do is contaminate our water supply and air. We have small children and elderly that we take care of off the water supply we have. We understand it is all county land but we are the surrounding neighbors and, "Don't want that Waste in our Face".

Sincerely Concerned Citizen

DEAR MR. SAM COE, PROJECT MANAGER.

SIR,

I DO NOT LIVE IN THE HIGH VISTA AREA but live ON 140TH ST. E. NEAR AVE H.

MY ONLY CONCERN WITH THIS PROJECT IS THAT I HAVE A WELL AND depend ON THIS FOR All MY WATER Needs.

AS long AS The underground WATER is NOT CONTAMINATED I don't HAVE A problem.

THANK YOU FOR YOUR TIME.

MICHAEL HAMILL

Coe, Sam@DTSC

From: Phil Chandler <philipbchandler@earthlink.net>
Sent: Monday, October 14, 2013 8:51 PM
To: Coe, Sam@DTSC
Cc: liza@consumerwatchdog.org
Subject: EDWARDS CLASS 3 MODIFICATION FOR OB/OD
Attachments: Edwards comments Oct 14 2013.docx

Please consider the attached comments.

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October 14, 2013

Sam Coe, Project Manager
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COMMENTS ON DRAFT RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), CLASS 3 PERMIT MODIFICATION FOR THE EDWARDS AIR FORCE BASE FACILITY RCRA-EQUIVALENT PERMIT, LOS ANGELES COUNTY, CALIFORNIA [EPA ID NO. CA157002450]

Dear Mr. Coe:

In the interests of disclosure, since the Department of Toxic Substances Control's (DTSC) Office of Legal Counsel (OLC) has indicated to me that it does not wholly subscribe to allowing me unabridged First Amendment rights, I hereby disclose that I work in the Brownfields and Environmental Restoration Program (BERP) at Chatsworth. However, this letter to you is written as a member of the concerned public not as a State of California employee.

In the Fact Sheet, it is stated that Edwards currently treats reactive hazardous wastes through Open Burning and Open Detonation (OB/OD) under the authority of a Stipulation and Order, pending DTSC's decision on the Modification request. It is further stated that if the Modification is granted, it would allow Edwards to continue to treat reactive hazardous wastes under a Resource Conservation and Recovery Act (RCRA) hazardous waste permit in place of the Stipulation and Order. It would allow Edwards to **continue to treat** reactive hazardous waste by OB/OD, to consolidate these treatment activities to the existing OB/OD units, and to expand operations by treating more waste than currently authorized. The types of waste treated include various propellants, unserviceable munitions and ordnance containing pyrotechnics, explosives, munitions casings, containers, and other materials contaminated with explosives. A January 19, 1993 Stipulation and Order has allowed for operation of the OB/OD units until DTSC makes a hazardous waste facility permit determination.

I have only a few brief comments dealing with environmental monitoring, COCs/Authorized waste codes, and the HRA.

ENVIRONMENTAL MONITORING

- Why does Part III.4 *ENVIRONMENTAL MONITORING* say "Not applicable."?

- Under Article 17, the environmental protection standard (EPS), shall consist of the list of hazardous constituents (Title 22 CCR §66264.703), concentration limits (Title 22 CCR §66264.704), and the monitoring points (Title 22 CCR §66264.705). [Title 22 CCR §66264.702]. Is Table 4.3-3 *Chemicals of Concern Evaluated in the Health Risk Assessment* in the draft EIR intended to represent this required list of hazardous constituents for air?

- In addition to sampling requirements specified in the Permittee's AVAQMD permit(s), the Permittee should also be required to monitor for airborne emission deposition/accumulation of the emitted hazardous constituents. Simply addressing airborne toxic air contaminants is not sufficient. Long-term particulate deposition and accumulation must be addressed in the Permit's monitoring program.

- The permit statement should include the phrase "and all subsequent revisions thereto" with reference to any AVAQMD or other documents being incorporated by reference.

- The draft EIR states that "...the proposed project would not significantly impact the geology or cumulative soil resources in the area." It does admit that "...the levels of some toxic contaminants in the soil might increase." It then states that '...monitoring as a condition of the Permit will ensure that soil contamination does not become significant." This would require a soil monitoring and response plan under Article 17. Is this what is being referred to?

- DTSC argues that "...given the large land area occupied by Edwards, the impacts of potential toxic contamination of the soil from the project is cumulatively insignificant." and that "There will be no regional change to soil characteristics or quality." A thin layer---millimeters---of waste constituents spread across the emission footprint might in fact have significant cumulative impact. Please address this. Moreover, the sampling upon which the cumulative impact statement is based needs to be addressed with regard to the airborne deposition/accumulation mechanisms. Specifically, the soil sampling that was done, and upon which these conclusions seem to rely, must match the thin nature of airborne deposition. Thin-skin surficial sampling must have been done---not the normal 1-foot or even 6-inch samples. Please address the sampling methods that provided the data utilized for both draft Permit Modification and draft EIR.

- Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for air for the regulated unit. That program should include deposition monitoring.

- Under Unit 2 (OD), it is stated that "...the Permittee shall implement DTSC-approved environmental monitoring programs, including sampling, analysis, statistical and trend analysis for soil, ecological receptors, groundwater, and other media as specified by DTSC. The plan for the monitoring programs shall include actions that will be taken in the event that monitoring results demonstrate an increase of contamination or risk to any media. This condition shall be met in accordance with Part V. Special Condition 2." This does not satisfy the requirements under Under Article 17 to specify in the Permit a soil monitoring and response program (SMRP). **Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for various media for the regulated unit including soil.** Please revise the draft permit to include the required monitoring program. DTSC should also include "thin-skin" soil sampling to supplement the shorter period wet and dry deposition monitoring that should be done under an AMRP. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.

- Under Unit 2 (OD), it is stated that, " Two years after the effective date of addition of the OD Unit to the Permit, and every two years thereafter, the Permittee shall submit a report for DTSC's approval on the efforts on the part of the Permittee to identify, evaluate, and test methods of sampling air emissions from OD events." This does not satisfy the requirements of Article 17 to specify an air monitoring and response program (AMRP). Two years to mess around and sort out the monitoring? **Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for various media for the regulated unit including for air.** Please revise the draft permit to include the required monitoring program now not in two years. DTSC should include wet and dry deposition monitoring that under the AMRP. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.

- Under Unit 2 (OD) it is stated that "Treatment residues in soil shall not exhibit a hazardous waste

characteristic as defined by Title 22, Cal. Code Regs. Division 4.5, Chapter 11." While this is nice, it does not appear to satisfy the need for specifying concentration limits under Title 22 CCR §66264.704. Please revise the draft Permit to include concentration limits for each COC. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.

- Under Unit 2 (OD) is stated "14. The annual quantity for OD and OB combined shall not cause a noncarcinogenic chronic hazard index of 1.0 to be exceeded at any offsite location, as calculated in the approved Human Health Risk Assessment." and "15. The event quantity for OD shall not cause an acute hazard index of 1.0 to be exceeded at any offsite location, as calculated in the approved Human Health Risk Assessment." These are quite nice in their way but depend on a HRA that may be flawed from not considering ALL of the waste codes being authorized and certainly not considering the airborne emission deposition/accumulation. Yes, I am aware that the USEPA/CARB/AQMD(various of them) basic models have deposition elements----however DTSC's work at Exide and Quemetco secondary lead smelters has demonstrated that such modeling does not adequately predict deposition/accumulation----otherwise why have hazardous levels of lead been found outside the facilities that confounded DTSC/SCAQMD's modeling? Please improve this requirement such that it is independent of a retrospective HRA. This comment also applies to Unit 3 (OB)---- Explosive Ordnance Disposal Range Open Burn (OB) Unit.

COCS/AUTHORIZED WASTE CODES

- The draft Permit states under Unit 1, that the "...RCRA hazardous waste codes are listed in Appendix 11a of the RCRA Part B Permit Renewal Application, Hazardous Waste Support Facility, December 2004, and are included here in Appendix A." Are these the codes also being authorized under this modification and from which the COCs are drawn? Is this HRA for all units, and not just the OB/OD units? Are there just two waste codes being authorized for the OB/OD units ----just D001 and D003 as cited in the Explosive Ordnance Disposal Range Open Detonation (OD) Unit and the Explosive Ordnance Disposal Range Open Burn (OB) Unit. Something seems odd here.

- Are additional waste codes and constituents being authorized in this modification over and above those that have been allowed under the 1993 Stipulation and Order? If they are, how have they been handled in the development of the HRA?

- It is believed that under DTSC's regulations, in particular title 22 CCR §66264.93, the COCs shall be all waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste associated with the authorized units. Please indicate if this is what the HRA was developed to match?

HEALTH RISK ASSESSEMENT

- It is stated in the draft EIR that the 2012 HRA estimated ground-level concentrations for toxic air contaminants at the maximum point of exposure and that concentrations were calculated for treatment of the energetics as well as entrainment of dust from the crater caused by detonation, ash handling, fugitive dust from grading, and dust and ash from wind erosion. Did the HRA address the surficial deposition/accumulation of particulates containing the waste constituents? If so, how?

- The "retrospective" DTSC approach to HRAs and the frequently "prospective" RCRA and California-only waste code authorizations seem to present an inconsistency at many DTSC sites. Although Table 4.3-3 of the draft EIR seems quite impressive, did the HRA cited in the draft EIR take into consideration the specific hazardous wastes, hazardous waste constituents, and

degradation products of ALL the waste codes for which it is authorizing the Air Force? If not, please explain why not---not just in a practical sense but in a statutory and regulatory fashions as well (with the appropriate supporting citations).

- Toxic air contaminant concentrations for crater dust, grading, and windblown dust were based on soil concentration data from sampling conducted at AFRL and on the PIRA as part of the Edwards AFB Installation Restoration. It is noted that the PIRA samples cited are from the former PIRA OB/OD Unit (Site 270) that was operational up to the early 1990s and is now inactive---in other words, this appears to be retrospective. Please explain how the dust data was obtained and what the airborne emission depositions were estimated to be.

Thank you for your consideration.

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