

RESPONSE TO COMMENTS

DTSC Approval of Open Burn/Open Detonation Unit Closure Determination For Aerojet, Chino Hills Chino Hills, California 91709

1.0 Introduction

On March 11, 2009, the Department of Toxic Substances Control (DTSC) released a March 2009 Fact Sheet accepting public comments on the Open Burn/Open Detonation (OB/OD) Unit Closure Determination for the Aerojet, Chino Hills Facility, located at the end of Woodview Road in Chino Hills. The March 2009 Fact Sheet #4, provides information on DTSC's intent to certify closure of the permitted Open Burn/Open Detonation (OB/OD) Unit and provides an update of site investigation and cleanup activities at the facility.

In March 2007, Aerojet submitted the Final Ordnance Removal Report and the Report on Completion of Third Party Quality Assurance Confirmation Survey to DTSC. In December 2008, DTSC approved both reports. Prior to issuing closure certification for the OB/OD Unit, DTSC held a 30-day public comment period that began March 11, 2009 and ended April 10, 2009. DTSC also hosted a community Open House on March 26, 2009, at the McCoy Equestrian Center, 14280 Peyton Drive, in Chino Hills to discuss the OB/OD Closure Determination, cleanup activities update and receive public comments. DTSC hereby responds to all public comments received during the 30 day public comment period as documented in this Response to Comments document.

The Final Ordnance Removal Report and the Report on Completion of Third Party Quality Assurance Confirmation Surveys document the closure of Aerojet's OB/OD Unit area and other project documents are available for public review at:

James S. Thalman
Chino Hills Branch Library
14020 City Center Drive
Chino Hills, CA 91709
(909) 590-5380

Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630
(714) 484-5337

In this Response to Comments, all comments are separated into the following sections:

Section 1: Introduction

Section 2: Public Comments Received on the OB/OD Unit Closure Determination

2.0 Public Comments Received on the OB/OD Unit Closure Determination

Comment 1: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

The public comment period began March 11 yet the reports to comment on were not available to the public until at least March 26, over two weeks into the process. This denied the public the information on which to comment on for at least half the comment period time. Would DTSC please extend the comment time an additional two weeks to have the documents available to the public? Would DTSC issue a public notice to reopen the comments to ensure that the public has the proper time and opportunity to comment on the OB/OD closure plan? Will DTSC put notices in the Orange County media, such as the Orange County Register and/or the Los Angeles Times, to inform these people of the a new comment period for OB/OD closure plan and the chance for the public to comment? If not, why not?

Response:

DTSC provided the reports to City of Chino Hills representatives on Tuesday, February 24th, 2009, to place into their library which well before the advertised public comment period. The City of Chino Hills indicated their library location was in the process of a physical move and did make the reports available upon their grand opening. DTSC confirmed with library staff that the reports were available to the public on or before March 30, 2009. DTSC did have the reports available at the DTSC Cypress office as advertised in the March 2009 fact sheet. Therefore, though the City of Chino Hills was unable to temporarily provide public viewing of the documents, the DTSC Cypress office was available. DTSC did not receive any other document availability requests or concerns and when DTSC did receive your request for information, the DTSC provided the documents per your request. DTSC has provided your informational needs request. DTSC has not received requests from any other persons stating they wished to make comments that they were not able to make during the comment period. DTSC has accepted all the comments from EnviroReporter.com and provided the requested documents. DTSC does not believe it is necessary to reopen the comment period.

Comment 2: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Did DTSC put notices in the Orange County media, such as the Orange County Register and/or the Los Angeles Times, to inform these people of the OB/OD closure plan and the chance for the public to comment? If not, why not?

Response:

During community interviews with residents and other Chino Hills stakeholders, the indicated newspapers read for the Chino Hills community is that of the Inland Valley Daily Bulletin and Chino Champion. No ads were placed in the Orange County Register or the Los Angeles Times as these newspapers are not identified for the Chino Hills community. DTSC places ads in newspapers in general circulation in the local community.

None of this material, including public notice of the recent community meeting, is on the DTSC Envirostor website at http://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CA D981457302

When we requested this material, as journalists and concerned parties, we were kindly sent two CD-R computer disks with, apparently, the entire file for the OB/OD closure process. However, as noted in our cover letter above, only 21% of the file size is actually readable on our computers which have fairly advanced software.

Comment 3: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Would DTSC consider posting all of this information on its Envirostor website, in an accessible format, for Aerojet Chino Hills to ensure that the public and interested parties, including us, have a chance to adequately inspect the information and therefore have the opportunity to intelligently comment on it? Would DTSC post this material online, post a public notice in the local media, and provide the public another full 30-day period to comment? If that is impossible, would DTSC please send us amended CD-R computer disks with the entire file for the OB/OD closure process readable on a computer with generally-used computer programs? Should DTSC do this, would it allow us additional time to inspect and comment on this information?

Response:

The entire files are on the CDs. Almost all the problems with reading the files on the CDs are due to not having the proper programs to read the files. DTSC was able to provide you with the means to read some of the files. Other files constituted raw geophysical data that cannot be interpreted without the proper specialized instruments. The nature of the data on the CDs is such that it would not be useful to post it online, since it

would not be readable by the general public. DTSC did provide the means to read as much of the data as was practical to those who asked for such means.

TESTING OF THE OB/OD 14-ACRE AREA'S SOIL AND SURFACE & SUBSURFACE GROUNDWATER FOR DEPLETED URANIUM (DU) CONTAMINATION

There are a number of issues related to this commented on, and questioned about, following: In the March 14, 2007 "Aerojet Chino Hills - Open Burn/Open Detonation Unit - Ordnance Removal - Project Final - Ordnance Removal Report," it reads on Page 49 that

"In addition to the types of ordnance identified above that were removed during the mechanical screening process, an intact DU tip was removed from the pick line of the screen plant in 2003. It was commingled with other items coming across the line where a UXO technician was stationed. The DU tip did not contain explosives, and thus did not need to be managed as an explosive."

Comment 4a: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

This means that the OB/OD area was used to test DU projectiles and ordnance. That shouldn't be surprising considering that "Aerojet assembled, developed, and tested depleted uranium munitions (DU) at the Aerojet Chino Hills Facility from the early 1970's until mid 1995, under a State of California radioactive materials license," according to Bernhardt, D.E. and Salsman, J.M. and Owen, D.H. and Vanderkar, D.E., D&D of a DU munitions test facility for unrestricted use, Proceedings of the Topical Meeting on Decommissioning, Decontamination and Reutilization of Commercial and Government Facilities (1997), pp. 81 - 6.

The preceding is available online at <http://fds.duke.edu/db/pratt/BME/faculty/dhowen/publications/65576>

Response:

The OB/OD was not used for DU testing and there were no DU test areas in the immediate vicinity of the OB/OD area. Therefore, uranium is not a constituent of concern at the OB/OD area. The cleanup of the DU test areas was overseen by the Radiologic Health Branch, now part of the Food, Drug and Radiation Safety Division, California Department of Public Health. The phone number is (916) 327-5106. DTSC has a number of reports relating to the DU cleanup available at the DTSC Cypress office. The complete record is available at the Radiologic Health Branch.

Comment 4b: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Does DTSC have a complete and comprehensive inventory list of munitions and ordnance tested, exploded, detonated and/or disposed of at the OB/OD site?

Response:

An inventory of munitions destroyed at the OB/OD unit is discussed in Section 2.4 of the Draft CONCEPTUAL SITE MODEL FOR MUNITIONS AND EXPLOSIVES OF CONCERN, Aerojet Chino Hills, dated July 12, 2007. An excerpt of that section reads: “The various types of ordnance found in the Project Area during RFI-related ordnance sweeps and OB/OD Unit closure activities are described in Tables 2 and 3, respectively. As noted in Tables 2 and 3, a total of 7,645 MEC items have been found during ordnance sweeps to date.”

Comment 4c: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Does DTSC have a complete and comprehensive inventory list of DU munitions and ordnance tested, exploded, detonated and/or disposed of at the OB/OD site?

Response:

Please see the response to comment 4a.

From Section 2.3.2 of the Draft CONCEPTUAL SITE MODEL FOR MUNITIONS AND EXPLOSIVES OF CONCERN, Aerojet Chino Hills, dated July 12, 2007, the following discussion on DU is provided: “Concurrent with the RFI, additional remediation efforts were completed to identify and remove depleted uranium as part of decommissioning and econtamination work. The D&D work was not part of the RFI and DU-containing munitions (which do not contain explosives) are not considered MEC. This work was implemented under the oversight of the DHS. As part of these efforts, ordnance avoidance and/or removal support and assistance were provided to the D&D subcontractor when it worked in areas that potentially contained both DU and MEC. Work plans to perform ordnance sweeps and to excavate soils that contained both DU and MEC were prepared (McLaren/Hart, Inc., 1997a and 1997b) and submitted to DTSC, as was a final report (McLaren/Hart, 1998). A Final Survey Report documenting D&D cleanup activities was submitted to, and is being reviewed by the DHS.”

Comment 4d: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Has DTSC ordered Aerojet to test the soil, surface water and groundwater at the OB/OD site for DU contamination? If not, why not? Has DTSC ordered Aerojet to test the soil, surface water and groundwater at the OB/OD site for alpha, beta and total radium-226 and radium-228 contamination? If not, why not? Were retrieved MECs checked for radioactivity? If not, why not? Was the scrap metal checked for radioactivity? If not, why not?

Response:

As stated in the response to comment 4a, the OB/OD Unit was not used for DU testing; therefore, radiologic testing, including alpha, beta and total radium-226 and radium-228, was not performed in the OB/OD Area. Radiologic testing at the site, including testing required for DU, was performed under the regulatory oversight of the Radiologic Health Branch, as discussed in response 4a.

POTENTIAL HEAVY METAL & VOLATILE ORGANIC COMPOUND (VOC) CONTAMINATION

"Over 260,000 cubic yards of soil were re-excavated and re-screened with over 47,000 items and 120,000 pounds of inert fragments recovered," says the DTSC notice of March 26, 2009 meeting, available at http://www.enviroreporter.com/files/Aerojet_FS_Cleanup_Activities_2_.pdf

Comment 5: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

The OB/OD screening process was for fragments of actual and suspected UXO and MEC over 1/2" (half-inch) in diameter. This does not take into account the possible residual contamination of smaller UXO and MEC objects, including, but not limited to, "vaporized" objects that were destroyed upon detonation.

Has DTSC ordered Aerojet to test the soil, surface water and groundwater at the OB/OD site for heavy metals and/or VOC contamination? If not, why not?

Response:

As part of the OB/OD closure activities, soils and surface drainage areas were tested for explosive chemicals, semivolatile organic compounds, and the metals antimony, arsenic, hexavalent chromium, mercury, nickel and vanadium. A 1994 Health Risk Assessment established cleanup levels for

these constituents. Sampling was conducted, and approximately 800 cubic yards of soil contaminated with explosive chemicals was excavated and transported off site for disposal. Additionally, approximately 500 cubic yards of soil contaminated with perchloroethylene and trichloroethylene was excavated from the “gully” area and transported off site for disposal. (References: 1) Screening Level Risk Assessment and proposed Soil Cleanup Levels for the OB/OD Area, dated 1/21/1994, 2) Revised Cleanup Levels for the Closure of the OB/OD Units, dated 8/26/94, 3) Open Burn, Open Detonation Units RCRA Closure Project, dated January 1996, 4) Completion of Site Closure Activities, dated 1/30/2007.

POTENTIAL RESIDUAL MEC CONTAMINATION IN OB/OD SITE

On page 8/27 of the 28-page PDF entitled “REPORT ON COMPLETION OF THIRD PARTY QUALITY ASSURANCE CONFIRMATION SURVEYS - Former Open Burn/Open Detonation Area” by Geomatrix Consultants, Inc. dated March 12, 2007, it states:

“The intent of this effort was to produce a final or “clean” survey map showing that the surveyed area was as free of anomalies as possible. However, because of the presence of very small pieces of metal fragments, hot rocks, and false positives (seemingly caused by natural geologic conditions), it was not possible to provide a “clean” map that would show the area completely free of electromagnetic signals.”

Comment 6a: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Does this mean that there is the possibility that metal fragments and/or small munitions and MECs could still be in the project area? What are the implications of this? Does this present any danger of MEC exposure to future visitors and/or construction workers at the project site?

Response:

Residual electromagnetic signals, also referred to as geophysical “noise” occurs at all locations when these types of instruments are used. This noise fluctuates based on many variables, including the movement (bouncing) of the instrument as it is pulled or traverses the site being mapped, from magnetic rocks (hot rocks), small metal fragments, geology, and cultural features such as fencing or other metal items present. Levels of this noise may have an affect on MEC detection. However, the closure of the OB/OD Unit was performed using sifting techniques and did not rely solely on geophysical mapping. While it is “possible” metal fragments smaller than the screen size exist, DTSC is confident that it’s highly

unlikely small munitions (or MEC) exist within the boundary of the Unit. Regardless, DTSC also recognizes the value of addressing even the smallest of possibilities and has suggested that ordnance awareness training be provided to workers or others who may dig or excavate soils within the unit. Such practices will further reduce the already very small possibility that small fragments can cause injury.

On page 18 of the 28-page PDF entitled “5010_Chino_PhI-II_Report_082306,” it states “Although some anomalies may appear as a single target, they may actually contain two, or possibly more, items. For instance, when two metal items are near each other, their anomalies can merge, creating an irregular shaped anomaly that may be picked as only one target. In addition, if there is a large item near a small one, the anomaly from the small item may be masked by that of the larger item.”

Comment 6b: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

If a small item’s magnetic signature is masked by a larger item’s signature, is it possible that the removal of the larger item may not include removal of the smaller item? If so, what are the implications of the smaller items being left in place? There is no indication that there was a system and/or procedure to deal with this in-situ situation. Or was there?

Response:

See Response to Comment 6(a).

Comment 6c: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

The reports do not give the specifications of the MEC detectors utilized on the project site. In order to ascertain relative risks from remaining MECs and/or small and large target items, it would be helpful to know how deep these instruments can penetrate. Can DTSC, Aerojet and/or Blackwater provide a list of all magnetometers used and their depth-detecting specifications?

Response:

The reader is referred to the Geophysical Prove Out report for detailed discussions. However, in general, the size, depth, and how the item is oriented relative to the sensor are the primary attributes for detection. Other factors affect detection as well, e.g., magnetometers will only detect ferrous containing items while electromagnetic sensors are termed all

metals detectors. The reader is also alerted to U.S. Environmental Protection Agency's Munitions and Explosives of Concern Hazard Assessment (MECHA) and the Department of Defense's Military Munitions Site Priority Protocol (MRSP) for additional discussion of relative risks from MEC. Links for these two qualitative risk models are:

http://www.epa.gov/fedfac/documents/MEC_HA_Methodology_Draft.Jan.2008.pdf, and www.spa.usace.army.mil/fuds/MRSPP.pdf

WORK DONE AT THE OB/OD SITE AS A RESULT OF A "SETTLEMENT"

DTSC provided EnviroReporter.com a 72-PDF report entitled: "Aerojet Chino Hills Open Burn/Open Detonation Unit Ordnance Removal Project Final Ordnance Removal Report". On page 6 of this report, PDF page 12/72, it reads:

"As a result of finding MEC in the previously processed soils of the OB/OD area (suspect backfill material), URS (as successor to D&M) and Aerojet entered into a settlement agreement under which URS agreed to repeat the soil excavation and screening process in the OB/OD area under a new contract and a new plant design and protocol. "As required by the settlement agreement, URS prepared the set of work plans described in Section 2.0, and retained Weston to provide work plan reviews and inputs, UXO technician support, and quality control activities of the field operations as they related to ordnance removal.

After all supporting documents were written and approved by all concerned parties, the rescreening project's field activities commenced in the summer of 2003."

Comment 7: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

What "settlement" is this passage referring to? Can DTSC provide a copy of this settlement? What are the exact reasons for the settlement and "new contract"? Could DTSC provide the new contract and "protocol" mentioned here? Could DTSC provide the "work plans" that URS prepared. And, who were "all concerned parties" mentioned here and was the general public informed of this process and have the ability to comment on it?

Response:

DTSC is not a party to this settlement and thus cannot provide a copy of the "settlement" or "new contract" or "protocol". Additionally, DTSC cannot comment on the reasons for the settlement and "all concerned parties". The settlement is between two private parties and is not subject

to any public involvement process. The workplans that URS referred to involve ordnance cleanup of the OB/OD Unit and are titled: 1) Technical Management Plan with a UXO Addendum that detailed the approach and specifics of the operations, 2) a Site Health and Safety Plan, and 3) an Ordnance and Explosives (OE)/Unexploded Ordnance (UXO), Quality control Procedures that specified the quality management elements of the project.

MORTAR SHELLS UNDER PAVEMENT

In the above-referenced 72-page report, on page 50, PDF page 56/72, it reads: “There were two 60mm mortars discovered during the spread and dry area sweep activities; however, both were located outside the affected project area. One of the 60-millimeter mortars was discovered on the northern outside edge of the spread and dry areas. The Weston UXO team discovered it while doing a sweep of one of the grids within Spread and Dry Area 1. UXO team members detected the item as they swung their Schonstedt over the edge of the grid into the adjacent area. The other mortar was discovered under the asphalt road at the far south end of the OB/OD area near the drainage culvert that ran under the road and out of the excavation area. The backhoe operator was scraping soil off the wall of the excavation area when his bucket scraped the edge of the road. That is when the round fell out from under the roadway pavement.”

Comment 8: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Can DTSC and Aerojet guarantee that all roads within the “kick-out” area surrounding the OB/OD area, available at http://www.enviroreporter.com/images/3-20-08A__OBOD_Kick-Out_radius.jpg and http://www.enviroreporter.com/images/3-20-08C__Hazardous_Fragment_Distance.jpg are free from mortar shells, UXO and/or MEC by the time the OB/OD closure is completed?

Response:

The specific regulatory action DTSC is undertaking and accepting comments on is closure acceptance for the OB/OD unit. Areas outside the OB/OD unit are being addressed under a separate regulatory process, Corrective Action.

“KICK-OUTS” OUTSIDE OF THE OB/OD SITE AREA

In the DTSC-provided document “Final Ordnance Removal Report on the Ordnance Removal Project” that occurred at the GenCorp Aerojet, Chino Hills, CA, Facility, from April 2003 to July 2006,” inclusively, it reads:

“In the way of background of the project, Aerojet began operations at the site in 1954 loading, assembling, and packing several government munitions systems under contracts with the United States Department of Defense (DOD). A representative number of assembled ammunition rounds were selected and fired in the test areas at the site to ensure the quality of the ammunition within given batches or “lots.” Rejected or “out of specification” ammunition was taken to a treatment area for destruction. Most of the out of specification ordnance items were destroyed through this process, but some items that were “kicked out” during detonation. The “kick out” items were dispersed throughout most of the OB/OD area. Some undetonated items remained within the shot hole. Operations ceased in November 1995.”

Comment 9: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

We realize that the answer to the question we ask here may be in the documents that we weren't able to open, but we don't know. Therefore we ask if DTSC and Aerojet can guarantee that all locations within the “kick-out” zone surrounding the OB/OD area, once again available at

http://www.enviroreporter.com/images/3-20-08A__OBOD_Kick-Out_radius.jpg
and http://www.enviroreporter.com/images/3-20-08C_-_Hazardous_Fragment_Distance.jpg are free from mortar shells, UXO and/or MEC by the time the OB/OD closure is completed or by the time of the final disposition of the property?

Response:

The “kick-out” areas are not part of the OB/OD Closure and instead are being addressed under Corrective Action. Please see the response to Comment 8.

PROVE-OUT AREA SHRINKAGE

Comment 10: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

According to the DTSC-supplied report "GEOPHYSICAL MAPPING WITHIN THE OB/OD AREA PHASE I AND II," it says

"The purpose of this survey is to conduct third-party digital geophysical mapping within the bottom of the OB/OD excavation to provide additional confirmation that URS Corporation was successful in removing unexploded/ ordnance explosive (UXO/OE) items from the OB/OD excavation area. UXO/OE is also known as munitions and explosives of concern (MEC)." DTSC provided a January 24, 2005 "Prove-Out" figure, available at http://www.enviroreporter.com/images/10-05-05A_-_bigger_OBOD_area.jpg. However, when the Prove-Out actually occurred, the area checked was considerably smaller in area as this figure from October 2005 shows: <http://www.enviroreporter.com/images/Chino71B.jpg> Why was the Prove-Out area actually surveyed smaller in area than the one originally planned? Can DTSC and Aerojet assure that there are no UXO and/or MEC in the areas not "proved-out" as show by the actual survey map?

Response:

The Geophysical prove out is only needed to confirm the projected performance of the instrument is within anticipated capabilities. The area surveyed on the other had pertains to the area under investigation and clean up, i.e. the RCRA OB/OD Unit as shown in figure attached to response #11. Regarding the question regarding assurances that "...no UXO and/or MEC in the areas not "proved-out" as show by the actual survey map?"

DTSC has issued a determination that the area within the Unit Boundary (see Figure 1), has been remediated to a level supportive of unrestricted use. Should additional information become available that is in conflict with this determination, further remedial action may be required.

UXO AND MEC DETECTIONS IN CONFIRMATORY SURVEY

In the above-referenced October 2005 figure of the confirmatory survey, there is evidence that there may still be UXO and/or MEC in the soil of the OB/OD site. This is also evident on four other figures provided, available at <http://www.enviroreporter.com/images/Chino7-4.jpg> and <http://www.enviroreporter.com/images/Chino7-5.jpg> and <http://www.enviroreporter.com/images/Chino7-2.jpg> and <http://www.enviroreporter.com/images/Chino7-3.jpg> Even more UXO and/or MEC contamination is apparent in the DTSC-provided figure from October 20, 2006, available at http://www.enviroreporter.com/images/QA_1.jpg especially in "Phase IV SPE" and "Phase IV DSG."

Comment 11a: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

We could not open the information about Phase IV in the CD-R computer disks that DTSC sent us, so we might be asking questions answered in those files we hope the department will send and allow additional time to comment on.

Regardless, what are the plans, if any, to sweep these two Phase IV areas for UXO/MEC again to make sure they are free from contamination, unexploded ordnance and munitions? Can DTSC and/or Aerojet explain why the area immediately north of Phase IV SPE, and immediately west of Phase I South Area, seem to have the highest amount of “mV” detections? Can DTSC and/or Aerojet explain what they intend to do to completely remediate these areas and assure their safety with Quality Assurance confirmatory mapping?

Response:

The boundaries of the Unit are presented in the following figure. Areas outside of the Unit will be addressed under the on-going Corrective Measures program and are not a subject of this Closure process. The reader is also referred to response #6(a)

HARMFUL CHEMICALS/DU IN THE SURFACE & SUBSURFACE WATER

The following excerpts are from DTSC's 2009 "Aerojet, Chino Hills, OB/OD Closure Determination, Cleanup Activities Update, Public Comment Period & Open House" P. 3/5: "Results showed there were no harmful levels of chemicals in surface waters, nor were any chemicals detected outside of or migrating from facility boundaries that posed a risk to human health or the environment."

P. 3/5: "The assessment determined levels of uranium in site soils are well within allowable levels for human health and safety. In September 2004, DTSC concluded its review and found that levels of uranium at the site in soil, surface water and subsurface water are within acceptable human health based levels."

Comment 11b: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

How could DTSC state this based on a report done before the OB/OD excavation and still say it when the OB/OD excavation did none of the tests mentioned above on the 14-acre OB/OD site after excavation?

Response:

Uranium levels at seven test ranges, a number of buildings, and several additional areas at Aerojet Chino Hills in soil, surface water and subsurface water were evaluated in the "Revised Preliminary Endangerment Assessment For Uranium Chemical Toxicity". This document evaluated human health risk from uranium levels in soils, surface water and subsurface water. Soil, surface water and subsurface water from the OB/OD unit was not included in this evaluation because DU was not used at the OB/OD Unit. Thus, uranium is not a constituent of concern at the OB/OD area. However, uranium is a constituent of concern at other areas of the site that are subject to Corrective Action.

Comment 11c: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

How could DTSC make this after the high readings of uranium in the surface and subsurface waters at Aerojet Chino Hills as shown by the one DU reports on DTSC's Aerojet website available at http://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CA D981457302?

This report yields two tables, one called "SUBSURFACE WATER SAMPLE RESULTS FOR URANIUM," which is available at

http://www.enviroreporter.com/images/3-03_DU4_-_Subsurface_water.jpg and the other called "SURFACE WATER SAMPLE RESULTS FOR URANIUM," which is available at http://www.enviroreporter.com/images/3-03_DU5_-_Surface_water.jpg EnviroReporter.com has analyzed the results and has found that DTSC seems to have erred in its conclusion about uranium contamination at the Aerojet Chino Hills site. Our analysis:
Table 5: Subsurface:

Upper A-12 Test Area: $0.404 \text{ mg/l} = 0.404 \text{ ppm} = 4,040.0 \text{ ppb} = 4,040.0 \times 0.86 = 3,474.4 \text{ pCi/L}$
 $3,474.4/20 = 173.72$ times U.S. EPA drinking water limit
 $3,474.4/30 = 115.81$ times U.S. EPA Maximum Contaminant Level
 $3,474.4/0.430 = 8,080$ times States Office of Environmental Health Hazard Assessment Public Health Goal.

Table 6: Surface:
Creek Tributary ["WG-01-17"]: $0.0885 \text{ mg/l} = 0.0885 \text{ ppm} = 885 \text{ ppb} \times 0.86 = 761.1 \text{ pCi/L}$
 $761.1/20 = 38.055$ times U.S. EPA drinking water limit
 $761.1/30 = 25.37$ times U.S. EPA Maximum Contaminant Level
 $761.1/0.430 = 1,770$ times States Office of Environmental Health Hazard Assessment Public Health Goal.

How does DTSC explain its statement in the 2009 meeting notice/brochure that "levels of uranium at the site in soil, surface water and subsurface water are within acceptable human health based levels" with numbers like the ones we put forth above?

Response:

The above calculations contain several methodological/mathematical errors. DTSC presents the correct calculations below:
Upper A-12 Test Area: uranium concentration (2001) of .404 mg/L
Specific activity of depleted uranium at Aerojet = 3.66×10^{-7} C/gm material (page 23 of Revised Preliminary Endangerment Assessment for Uranium Chemical Toxicity)
Therefore, .404 mg/L is equivalent to 147.8 pC/L

Creek Tributary (WG-01-17): uranium concentration of 0.0885 mg/L is equivalent to 32.4 pC/L

The California Maximum Contaminant Level for uranium in drinking water is 20 pC/L and is the regulatory threshold for drinking water in California. DTSC acknowledges that the subsurface water at the Upper A-12 Test area exceeds the MCL. However, there is no exposure pathway for humans

under present site conditions (ground surface is undisturbed). The surface water at the Creek Tributary is slightly above the MCL. However, these concentrations were addressed in the Revised Preliminary Endangerment Assessment for Uranium Chemical Toxicity and found to be within acceptable levels. The OB/OD Closure process does not include either of these locations; they are not part of the OB/OD Unit. These areas are being addressed as part of Corrective Action.

SURFACE WATER LEAVING AEROJET SUBJECT TO STRINGENT LAWS

Comment 12a: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

It is possible that DTSC and Aerojet are under the misimpression that the surface and subsurface waters at the OB/OD site, which were not tested, and other surface and subsurface waters leaving the site, including those polluted with high amounts of uranium, are not subject to regulation? That would seem to be incorrect.

Response:

The surface and subsurface waters at the site are subject to regulation by DTSC under Health and Safety Code, chapter 6.5, California Code of Regulations, title 22 and also by the Santa Ana Regional Water Quality Control Board under its regulations. Surface water in Soquel Canyon Creek approximately 1.75 miles downstream from the Aerojet site was tested for perchlorate, RDX and HMX in 1998 and again in 2001, and none of these chemicals were detected in surface water on either occasion. (Reference Report of 2007 Surface and Subsurface Water Quality Studies). Surface water on the Aerojet Chino Hills site and from Soquel Canyon Creek at the location approximately 1.75 miles downstream from the Aerojet Chino Hills property were also sampled for uranium and nitrate, in addition to perchlorate and explosive residues, in 2001. The concentration of uranium in the Soquel Canyon Creek sampling location was less than the California Maximum Contaminant Level for uranium in drinking water of 20 pC/L.

Subsurface waters at three facility wells outside of the known areas where uranium is a constituent of concern were also sampled for uranium in 2002. These locations were an abandoned oil well located on a hillside near the former water tank, the Area 1 well, and the "Lake Aerohead" well. Water in the abandoned oil well was collected from approximately 112 feet below the well casing. Uranium was not detected in the sample. The other two wells are both located in the valleys of the intermittent drainages along the southern part of the Aerojet Chino Hills site. A sample was collected from about 9.5 feet below the well casing from the "Lake Aerohead" well and

uranium was detected at 1.63 ug/L. The sample collected from about 10.2 feet below the casing of the Area 1 well yielded uranium at about 1.11 ug/L. The detection limit for uranium was 1 ug/L. As stated earlier, the OB/OD Closure process does not include these locations; they are not part of the OB/OD Unit. These areas are being addressed as part of Corrective Action.

Comment 12b: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

In an October 17, 2000 DTSC report entitled "NOTICE OF DECISION FOR APPROVAL OF CORRECTIVE MEASURES FOR THE AEROJET ORDNANCE - CHINO HILLS FACILITY," available at http://www.envirostor.dtsc.ca.gov/public/hwmp_community_involvement/1269406974/Aero%2520CEQA%252Epdf.pdf, it reads on page 31 of the 75-page PDF:

"Surface Water Rainfall runoff from the central 01 southern portion of the Facility (covering approximately 80% of the Facility) drains toward the west into Soquel Canyon. Surface water runoff within Soquel Canyon accumulates in Lake Aerohead(sic) Lake Aerohead(sic), located within the Facility, is used for the detention of rainwater runoff only and is commonly dry. An intermittent stream flows through the canyon toward the west for approximately 5 miles before entering a reservoir behind Carbon Canyon Dam. Rainfall runoff from the northern portion of the Facility (covering approximately 20% of the Facility) drains toward the northeast into an unnamed canyon. An ephemeral creek within this unnamed canyon flows northeast for approximately 4 miles where it drains into Lake Los Serranos, a privately owned lake used for runoff control. Overflow from Lake Los Serranos flows another 2 miles where it drains into the Prado Dam Flood Control Basin."

The report does not make clear that the water draining into Soquel Canyon, seen here at

http://www.enviroreporter.com/images/OB-OD_aerial_POV-2.jpg, makes its way to the Santa Ana River, as this figure shows:

http://www.enviroreporter.com/images/Carbon_Canyon_Dam_location.jpg

So does the water from the Prado Dam as this figure shows:

http://www.enviroreporter.com/images/Prado_dam_map.jpg

Response:

The document referred to in this comment "Notice of Decision for Approval of Corrective Measures for the Aerojet Ordnance-Chino Hills Facility" is part of a California Environmental Quality Act (CEQA) decision that was public noticed in April and May 1999, and does not relate to the OB/OD Closure public notice process in 2009. DTSC recognizes that the Soquel

Canyon Creek drainage terminates in the Carbon Canyon Creek drainage, which in turn terminates in the Santa Ana river.

Comment 12c: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

On p.50/75 of this PDF, [DTSC](#) writes:

“All contamination exceeding cleanup levels will be removed such that the site-wide carcinogenic risk will be less than 1×10^{-6} and the site-wide hazard index for a child will be less than 1.0 for a future residential land use scenario.”

In the “Response to Comments for Corrective Measures - Part 2” on the Envirostor website, dated October 17, 2000 and available at http://www.envirostor.dtsc.ca.gov/public/hwmp_community_involvement/8276075065/Part%202.pdf, says on page 10 of the 152-page PDF:

“Aerojet shall be required to submit data documenting the existing levels of uranium at the facility, and to conduct sampling of surface water and groundwater at the Facility for uranium. This requirement is being added to ensure that existing levels of uranium are protective of human health and the environment for a future residential land use scenario.”

Does DTSC and Aerojet realize that the above-cited uranium levels, in Tables 5 and 6, for surface and subsurface waters are too high to fulfill the levels needed for unrestricted residential land use, especially when vast parts of the site, and the OB/OD in particular, have not been fully characterized for depleted uranium contamination, heavy metals, chemicals, and volatile organic compounds in the soil, surface and subsurface waters? Does DTSC and Aerojet realize that “water” that flows offsite into Soquel Canyon Creek, and north into Chino Creek on its way to the Prado Dam, is regulated by the Clean Water Act, the Porter-Cologne Act and a host of other strict state and regional rules, regulations and laws?

Response:

As stated in responses to comments 3a and 11b, uranium is not a constituent of concern at the OB/OD unit because it was not used at that location. DTSC recognizes that surface water flows off site into Soquel Canyon Creek. Additionally, about 20% of the Aerojet Chino Hills facility has intermittent drainage to the north. DTSC recognizes that surface waters flowing off the Aerojet site are regulated by the Santa Ana Regional Water Quality Control Board and the applicable laws and regulations. These areas are not part of the OB/OD and are not being cleared for unrestricted use. These areas are being addressed separately under corrective action.

Comment 12d: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

Could DTSC please explain how it could miss these high reading of uranium in the surface and subsurface water when it has already stated repeatedly that its goal is to release the site for unrestricted use including a residential land use scenario?

Response:

DTSC is releasing the OB/OD unit land for unrestricted use. The specific land use will be determined by the City of Chino Hills, and may or may not include residential land use. Areas with known use of uranium and subsequent concentrations of uranium in the soil or in the subsurface are subject to Corrective Action at the Facility. Uranium readings were not missed. The Corrective Action decision will be described in additional documents separate from the OB/OD Closure.

LAWS APPLICABLE TO OFFSITE MIGRATION OF AEROJET WATER

According to Santa Ana Regional Water Quality Control Board (SARWQCB), the drainage off of Aerojet Chino Hills is in their jurisdiction as this map shows: http://www.waterboards.ca.gov/santaana/about_us/full_screen_map_2.shtml "Carbon Canyon Creek" and "Chino Hills" are noted on this map available at http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

is the Santa Ana River Basin Plan. We downloaded this SARWQCB plan in a ZIP folder and opened it. It has 7 chapters which are excerpted here that are directly applicable to the water leaving the Aerojet Chino Hills site, including the OB/OD area. We include selected excerpts printed in green and highlighted it:

Chapter 2:

P. 2/5 (3-2)

The SWRCB [sic] policy requires the continued maintenance of existing high quality waters unless there is a demonstration that: (1) allowing some degradation is consistent with the maximum benefit to the people of the state; and (2) that such degradation would not unreasonably affect existing or potential beneficial use.

Chapter 3:

P. 18/42 (3-18)

An "I" in Table 3-1 indicates that the water body has an intermittent beneficial use. This may occur because water conditions do not allow the beneficial use to exist year-round. The most common example of this is an ephemeral stream. Ephemeral streams in this region include, at one extreme, those which flow only while it is raining or for a short time afterward, and at the other extreme, established streams which flow through part of the year but also dry up for part of the year. While such ephemeral streams are flowing, beneficial uses are made of

the water. Because such uses depend on the presence of water, they are intermittent. Waste discharges which could impair intermittent beneficial uses, whether they are made while those uses exist or not, are not permitted.

P. 23/42 (3-23)

Carbon Canyon Creek, Hydrologic Unit #845.63, designations:

MUN: Municipal and Domestic Supply (MUN) waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.

GWR: Groundwater Recharge (GWR) waters are used for natural or artificial recharge of groundwater for purposes that may include, but are not limited to, future extraction, maintaining water quality or halting saltwater intrusion into freshwater aquifers.

REC1: Water Contact Recreation (REC 1*) waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing and use of natural hot springs.

REC2: Non-contact Water Recreation (REC 2*) waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting sightseeing and aesthetic enjoyment in conjunction with the above activities.

WARM: Warm Freshwater Habitat (WARM) waters support warm water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

WILD: Wildlife Habitat (WILD) waters support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

RARE: Rare, Threatened or Endangered Species (RARE) waters support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered.

Chapter 4:

Pages 1/55 (4-1)

WATER QUALITY OBJECTIVES

INTRODUCTION

The Porter-Cologne Act defines water quality objectives as "...the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." (§13050 (h)). Further, the Act directs (§13241) that: "Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses as the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without

unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

- (a) Past, present, and probable future beneficial uses of water.
- (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
- (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
- (d) Economic considerations.
- (e) The need for developing housing within the region.
- (f) The need to develop and use recycled water.”

P. 5/55 (4-5)

Radioactivity

Radioactive materials shall not be present in the bay or estuarine waters of the region in concentrations which are deleterious to human, plant or animal life.

P. 6/55 (4-6)

Toxic Substances

Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to level which are harmful to human health.

The concentrations of toxic substances in the water column, sediments or biota shall not adversely affect beneficial uses.

P. 15/55 (4-15)

Radioactivity

Radioactivity materials shall not be present in the waters of the region in concentrations which are deleterious to human, plant or animal life. Waters designated MUN shall meet the limits specified in the California Code of Regulations, Title 22, and listed here:

Combined Radium-226 and Radium-228 5 pCi/L

Gross Alpha particle activity 15 pCi/L

Tritium 20,000 pCi/L

Strontium-90 8 pCi/L

Gross Beta particle activity 50 pCi/L

Uranium 20 pCi/L

Pages 20-21/55 (4-20 & 4-21)

Metals

Metals can be toxic to human and animal life.

Metals concentrations shall not exceed the values listed below in groundwaters designated MUN as a result of controllable water quality factors.

Metal Concentration (mg/L)

Cadmium 0.01

Chromium 0.05

Cobalt 0.2

Copper 1.0

Iron 0.3

Lead 0.05

Manganese 0.05

Mercury 0.002
Selenium 0.01
Silver 0.05
[END OF SNIPPETS]

Comment 13: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

DTSC is charged with protecting the public health from toxins and making polluters obey the rules and regulations just like the rest of the public. The SARWQCB's charge is to protect the waters that feed the Santa Ana River. Has DTSC or Aerojet contacted the SARWQCB or State RWQCB about polluted surface and subsurface water at the site? If so, what is the extent of that contact and what was the result(s)? Is DTSC aware of any NYPDES [National Pollution Discharge Elimination System] monitoring done at the Aerojet Chino Hills site as a result of these contacts? Is DTSC and/or Aerojet aware that less than 5 miles from the site is Carbon Canyon Regional Park where people fish for, and eat, channel catfish, bass, blue gill and carp in a 4-acre lake intermittently fed by Carbon Canyon Creek? If not, does the amount of uranium, and other toxic compounds leaving the site via surface water, make DTSC and/or Aerojet consider testing this small lake just downstream of where 80% of Aerojet Chino Hills' effluent flows?

Response:

The Santa Ana Regional Water Quality Control Board is not on the DTSC project mailing list at this time and therefore did not receive notification of the OB/OD closure. This is because the OB/OD Unit did not involve groundwater. Since none of the activities performed as part of the OB/OD Closure required an NPDES permit, no NPDES monitoring was performed. DTSC is aware that Carbon Canyon Regional Park is downstream of the Aerojet Chino Hills Facility. As stated in the response to comment 12a, surface water downstream of the Aerojet facility was collected and analyzed both in 1998 and again in 2001.

Comment 14: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

* **FUTURE LAND USE RESTRICTIONS**

Radon is a daughter product of uranium and is known to cause a variety of ailments, including lung cancer. Considering that the amount of residual uranium/depleted uranium that is left in the OB/OD soils, IF DTSC signs off on unrestricted land use for residential development, will the department require that

Aerojet and/or any subsequent landowner or developer monitor for radon in the basements of any dwellings built on the OB/OD area of Aerojet?

Response:

As stated in the response to comment 4a, uranium is not a constituent of concern at the OB/OD unit. Radiologic concerns at the site were addressed by the Radiologic Health Branch, now part of the Food, Drug and Radiation Safety Division, California Department of Public Health. If you wish to contact them further, their phone number is (916) 327-5106.

[ADDITIONAL QUESTION ADDED May 3, 2009]

Comment 15: Comment Received from Michael Collins & Denise Anne Duffield, EnviroReporter.com, mlc@enviroreporter.com, dee@enviroreporter.com

DTSC stated in its announcement of the March 2009 meeting that “DTSC’s main objective for cleanup is protection of human health, the environment and public safety. Before the current land use can change, DTSC will assess whether the clean up is successful and the property is safe to be used for its intended purposes.” Should DTSC release the land for the “intended purpose” of residential housing, will it have, as a condition of release, that any groundwater under the site, or rain water collected at the site, not be used for potable and non-potable uses at the site? Should DTSC release the land for the “intended purpose” of residential housing, will it have, as a condition of release, that the soil, surface water and groundwater, be sampled and tested under the OB/OD, and the entire Aerojet Chino Hills property, for contaminants including, but not limited to, DU, heavy metals, chemicals, RDX, HMX, VOC’s and dioxins? If not, why not.

Response:

DTSC would like to clarify that the OB/OD area is being released for unrestricted use. This may or may not include residential housing. The specific land use decision is made by the City of Chino Hills. There is no surface water body at the OB/OD area, but surface water on the Aerojet Chino Hills facility has been sampled. Offsite surface water in Soquel Creek has also been sampled. Groundwater under the site is not designated as part of the regional groundwater basin. Therefore, the water quality objectives in the Santa Ana River Basin Plan, prepared by the Santa Ana Regional Water Quality Control Board, do not apply to groundwater under the Aerojet site.

[END OF COMMENTS/QUESTIONS FOR 21% OF TOTAL OB/OD CLOSURE AND CLEANUP UPDATE MATERIAL]

Again, Denise Anne and I thank you for this opportunity to comment on some of this important material. We look forward to your responses to our comments and answers to our questions. We also look forward to being able to read the other 79% of the material which might best be posted on DTSC's Envirostor website for the public to have access to it. Thank you.

Response:

As stated in the response to comment #3, DTSC provided you with the means to read some of the remaining 79% of the files. Other files constituted raw geophysical data that cannot be interpreted without the proper specialized instruments.

Comment 16: Comment Received from Gary and Patricia Dumas, 15795 Sprig Street, Chino Hills, CA 91709-2826

Focus was/is on OB/OD Unit area. Other adjacent areas also pose potential threat. Case closure of OB/OD should not be construed nor generalized to waive or let up on inspections outside the OB/OD Unit. All of Aerojet properties need to undergo same rigors, with corrective actions extending beyond the current OB/OD unit. Whatever such occurs, inform us and all precisely when burn or detonate and what duration, and disclosure how long such smoke, fumes or other particulates (whether or not deemed toxic) are expected to be emitted or of any residual effect. Full disclosure must take place, whether or not specifically requested.

Response:

The entire site is undergoing comprehensive sampling, analysis, and Corrective Action. DTSC will keep the public informed of the results of its investigations at the site.

Comment 17: Comment Received from Estrella and Holger Ortiz, 15516 Fiscus Street, Chino Hills:

The reports need to be simplified for the lay person to better understand. Our water doesn't come out clean and I've complained to the City. We're about 1-1/2 miles from the Aerojet site. We are very concerned and need assurance that our water is/or isn't safe to drink and cook with.

Response:

DTSC strives to summarize data in layman's terms in its Fact Sheets and workshops it holds for the public. DTSC invites anyone who wishes to understand the project better to attend such workshops for further clarification. DTSC project staff may be contacted for any questions and

our contact information is freely available. The OB/OD closure does not involve impacts to groundwater. Impacts to groundwater are being addressed separately under Corrective Action. Chino Hills residents have previously questioned the safety of their drinking water which the City of Chino Hills is responsible for. Please contact Mr. Steve Setlack, Water Production Supervisor, (909) 364-2806, to get more information.

Comment 18: Comment Received from Shirley Ayala, 3223 Oakcreek Road, Chino Hills, CA 91709

I just pray they do a complete job of healthy cleanup. Before Vellano I went through my neighborhood with a petition and we went to City Council meetings with our concerns. Very sad this wasn't taken care of before building below.

Response:

Comment noted.

Comment 19: Comment Received from Wanda Moore, 4886 Petersen Street, Chino Hills, CA 91709

What toxic substances were used? Are they water, airborne, soil toxins? I wouldn't want another Erin Brokovich again.

Response:

The contaminants found at the OB/OD unit included military ordnance (both exploded and unexploded projectiles), explosive compounds, and perchlorate. Groundwater is not a pathway of concern at the OB/OD unit. The contaminants were in the soil, and not airborne.

Comment 20: Comment Received from Noemi Luna, 16671 Sagebrush Street, Chino Hills, CA 91709

My concern is that the site may reveal toxic results only after many years. Tests may not be conclusive because not enough time has been allowed to reveal real-time results. I hope that future plans for this Aerojet facility will not jeopardize any lives. I hope that resident confidence is not mocked at with hasty decisions or for this profit of money by any one agency!

Response:

DTSC will not consider the site acceptable for any given land use unless it has determined that the site meets DTSC's standards for such use. DTSC takes as much time to investigate a site as scientific standards require.

Comment 21: Comment Received from RW and Leslie L. Tillema, 3510 Autumn Avenue, Chino Hills, CA 91709

We just want to make sure our neighborhood and we are safe from harm.

Response:

DTSC's mission is to protect human health and the environment.

Comment 22: Comment Received from Andre and Kimmie Dixon, 16657 Cobalt Court, Chino Hills, CA 91709

We are curious how the City plans for the future on the project.

Response:

DTSC does not determine land use for the site. Information about such use should be directed to representatives for the City of Chino Hills.

Comment 23: Comment Received from Benjamin Jarieh, 4408 Torrey Pines Drive, Chino Hills, CA 91709

Excellent work! Thanks for all your effort, testing and reporting back to residents.

Response:

Comment noted.

Comment 24: Comment Received from Debra Papaioanu (for Louella Papaioanu), 2037 Hunter Road, Chino Hills, CA 91709

My mother at the above address has dementia which started approximately 2006 at age 66. Her next door neighbor also had it at this young age and subsequently died of some related complication. Have you done soil studies in her area?

Response:

DTSC is investigating the entire Aerojet site as part of ongoing Corrective Action.

Comment 25: Comment Received from Josephine Taylor, 2827 Venezia Terrace, Chino Hills, CA 91709

I would like to know if there are published reports or medical data for the surrounding area. Such as is there a higher incidence of cancer or other diseases which are known. When they speak of ordnance what specifically are

we referring to? The report mentions after the cleanup of the remaining (10?) areas no additional assessment work is required. Does this mean that we will not do a final assessment to determine if the final cleanup met all the standards required?

Response:

DTSC does not maintain a cancer registry nor does it conduct epidemiological studies. In 1999, and in response to community concern the Desert Sierra Cancer Surveillance Program conducted a cancer assessment in Chino Hills. The cancer assessment failed to identify any excess in neuroblastoma, childhood cancer, or all cancer types combined for all age groups. For information on the cancer assessment conducted please contact:

John W. Morgan, DrPH, Cancer Epidemiologist
11368 Mountain View Avenue, C
Loma Linda, California 92354
Tel: (909) 558-6181
(909) 558-6178 fax
E-mail: jmorgan@llu.edu

Comment 26: Comment Received from Linda G. Casillas, 17871 Shady View Drive #705, Chino Hills, CA 91709

I moved to Chino Hills in 1997 and never have I been as ill. I have developed allergies and was diagnosed with lupus. When two (2) years later I heard about Aerojet I suspected my health problems were caused by the toxic chemicals in the air. Please inform me of the progress in this matter.

Response:

The chemicals of concerns identified at the OB/OD Unit were exploded and unexploded ordnance, explosive compounds and perchlorate, none of which are volatile. These chemicals were primarily associated with soil and would only pose a potential threat from direct contact. Those areas where chemicals did pose a potential threat to human health were cleaned up to levels for unrestricted land use, meaning a person could live on the site 24 hours/day, 7 days/week.

Allergies are very common in southern California, especially in foothill areas where there are numerous allergens, including spores, molds and pollen. Any chemicals that may have become airborne as soil particulate would have been at such low concentrations that allergies or immune response would never occur.

Regarding lupus, researchers and the medical community currently do not know what causes lupus. Most researchers agree that genetics is at least one factor

that may be involved in developing lupus. Other areas being investigated include environmental factors (e.g., UV light, smoking, toxins), stress, hormones, viruses and bacteria, and medications. Unfortunately, there is very little understanding of the cause(s) of autoimmune disease at this time. DTSC will continue to inform the community on continuing work activities at the site.

Comment 27: Comment Received from Thea Droog, 15255 Oakwood Lane, Chino Hills, CA 91709

The Aerojet – Chino Hills Fact Sheet #4, March 2009 stated that an assessment was done in 1999 by the Calif Cancer Registry regarding excess cancer. I would like to request a reassessment of the cancer cases since 1999. I've had my husband and 1 [one] child die because of cancer. They were both long term residents of Chino Hills. I also know of other long term neighbors who are dealing with cancer now or have died because of cancer. I would like to see a copy of the 1999 assessment in addition to any other assessments in the future.

Response:

The 1999 cancer assessment is available for public review at the Information Repository located at: James S. Thalman Chino Hills Branch Library, 14020 City Center Drive, Chino Hills, CA 91709, and at the DTSC Cypress Office, 5796 Corporate Avenue, Cypress, CA 90630. The 1999 cancer assessment is also available for review on DTSC's EnviroStor website, www.envirostor.dtsc.ca.gov. For your convenience, DTSC will mail you a hard copy of the 1999 cancer assessment. For more information on the 1999 cancer assessment conducted or information on any new cancer assessment please contact:

**John W. Morgan, DrPH, Cancer Epidemiologist
11368 Mountain View Avenue, C
Loma Linda, California 92354
Tel: (909) 558-6181
(909) 558-6178 fax
E-mail: jmorgan@llu.edu**

Comment 28: Comment Received from Cheri Little, 4867 Sapphire Road, Chino Hills, CA 91709

I believe that another cancer assessment should be conducted since the last assessment was done ten years ago. Many cancers have been found in and around the areas of the OB/OD Unit since 1999. The residents should definitely be entitled to demand another assessment and subsequent reporting's that are updated and accurate to current year 2009. Especially since many cubic yards of soil 260,000 cubic yards plus, have been excavated since 2003 and ordnance was continuing to be found (47,000 items and 120,000 pounds of inert fragments

were recovered). I'm convinced that every time the soil is stirred, moved and excavated that more toxins are released into our air and water that results in higher exposure to humans in the surrounding areas. So, if we are to protect the public's health, I believe that a current study is crucial and should be demanded by the Department of Public Health Radiologic Health Branch to the California Cancer Registry.

Response:

The 1999 cancer assessment is available for public review at the Information Repository located at: James S. Thalman Chino Hills Branch Library, 14020 City Center Drive, Chino Hills, CA 91709, and at the DTSC Cypress Office, 5796 Corporate Avenue, Cypress, CA 90630. The 1999 cancer assessment is also available for review on DTSC's EnviroStor website, www.envirostor.dtsc.ca.gov. For your convenience, DTSC will mail you a hard copy of the 1999 cancer assessment. For more information on the 1999 cancer assessment conducted or information on any new cancer assessment please contact:

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Loma Linda, California 92354
Tel: (909) 558-6181
(909) 558-6178 fax
E-mail: jmorgan@llu.edu**

Comment 29: Comment Received from Trina Tadrack, 4938 Citron Court, Chino Hills, CA

I would like a full scale review – report – investigation on all cancers reported in Chino Hills for the last 25 years. With an emphasis on child cancer – leukemia – brain tumors. I know our city's average is above normal (state and county average). I need these items to be clarified and addressed. We have too many kids with cancer. Why?

Response:

The 1999 cancer assessment is available for public review at the Information Repository located at: James S. Thalman Chino Hills Branch Library, 14020 City Center Drive, Chino Hills, CA 91709, and at the DTSC Cypress Office, 5796 Corporate Avenue, Cypress, CA 90630. The 1999 cancer assessment is also available for review on DTSC's EnviroStor website, www.envirostor.dtsc.ca.gov. For your convenience, DTSC will mail you a hard copy of the 1999 cancer assessment. For more information on the 1999 cancer assessment conducted or information on any new cancer assessment please contact:

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11368 Mountain View Avenue, C
Loma Linda, California 92354
Tel: (909) 558-6181
(909) 558-6178 fax
E-mail: jmorgan@llu.edu

Comment 30: Comment Received from Vidal Savilla, 3035 Venezia Terrace,
[Chino Hills, CA 91709]

Concerned of the toxic soil and air billowing from your activities.

Response:

The chemicals of concerns identified at the OB/OD Unit were exploded and unexploded ordnance, explosive compounds and perchlorate, none of which are volatile. These chemicals were primarily associated with soil and would only pose a potential threat from direct contact. Those areas where chemicals did pose a potential threat to human health were cleaned up to levels for unrestricted land use, meaning a person could live on the site 24 hours/day, 7 days/week. All cleanup activities were conducted according to a very stringent health and safety plan designed not only to protect cleanup workers but also protect nearest residents during any soil excavation activities. During soil removal operations, dust suppression was employed and real time air monitoring was performed to ensure that dust did not impact offsite areas.

Comment 31: Comment Received from Lottie Bailey, 16147 Pebble Beach Lane,
Chino Hills, CA 91709

I live near the former Aerojet facility and thought it would be prudent of me to be appraised of whatever is currently happening there.

Response:

Comment noted. DTSC holds public workshops and/or issues fact sheets for the local community whenever significant developments occur at the site.

Comment 32: Comment Received from Hilda Rodriguez, 4288 Descanso
Avenue, Chino Hills, CA 91709

Please keep me on the mailing list – keep me informed of DTSC activities. Thank you.

Response:

Comment noted.