

**DEPARTMENT OF TOXIC SUBSTANCES CONTROL
GEOLOGY AND CORRECTIVE ACTION BRANCH**

**RESPONSE TO COMMENTS
FOR
CORRECTIVE MEASURES**

**AEROJET ORDNANCE - CHINO HILLS FACILITY
END OF WOODVIEW ROAD
CHINO HILLS, CALIFORNIA
EPA ID NO. CAD9814457302**

Table of Contents

I.	Introduction	1
II.	Description of Project	1
III.	Resources	4
IV.	Responses to General Comments	5
V.	Responses to letters addressed to DTSC	13
	Androus, Scott	14
	Brock, Candice	17
	Dobrikin, Carol (et. al)	17
	Goodenough, Douglas + Stacey	19
	Hernandez, Andre	20
	Hokam, Wayne S.	21
	Kerr, Raymond & Heidi	21
	Mikels, Marjorie	25
	Miller, Todd & Karen	47
	Morton, Judy	48
	Sloss, Kimberly	69
	Steinseifer, Suzanne E.	81
	Unrein, Mary	83
	Vanbarriger, Glenn	84
	Physicians for Social Responsibility	90
	Chino Valley Unified School District	96
	State of California, Department of Conservation	97
	State of California, Department of Parks and Recreation	97
	City of Chino Hills	99
	State of California, Department of Transportation	100
VI.	Responses to Comments from the Public Hearing	101
VII.	Responses to Comments from the June 7, 1999 public meeting	176

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I. INTRODUCTION

On April 14, 1999, the California Environmental Protection Agency-Department of Toxic Substances Control (DTSC) issued a public notice and public comment period to accept public comments on the proposed Corrective Measures, the Initial Study and proposed Negative Declaration for hazardous waste cleanup of the Aerojet General Corporation (Aerojet) Ordnance - Chino Hills Facility (Facility). The public comment period was originally scheduled to end May 28, 1999. However, it was extended to June 30, 1999 to allow additional time for public comments after the public hearing. DTSC is hereby responding to comments received in writing as well as those received during the public hearing held on May 15, 1999 in Chino Hills, California.

In this Response to Comments, general comments that came up frequently will be discussed in Section IV. Responses to individual comments received in writing are presented in Section V. The responses to comments made at the public hearing are presented in Section VI.

A list of the acronyms used throughout this document is included as Attachment A.

On June 7, 1999 a community meeting was hosted by the Chino Hills City Council to provide an opportunity for the members of the community to ask questions and receive answers regarding the proposed Corrective Measures. Mr. Doug LaBelle, City Manager has submitted the transcript of this meeting to DTSC. Although answers to the questions were provided at the meeting, DTSC has provided additional responses to some of these comments based on information in Sections IV, V and VI. The transcript of the meeting and DTSC's responses to the comments are presented in Section VII.

II. DESCRIPTION OF PROJECT

The Corrective Measures (also referred to as the Remedy or cleanup measures) proposed in May and June of 1999 consist of several field operations being performed at 10 areas of the site as described in the fourth paragraph below. DTSC has added a number of conditions of approval to the Corrective Measures, and these conditions are included as Attachment B of this Response to Comments. Several of the conditions are described in the project description below.

This project consists of Corrective Measures to clean up contamination found in soil and water at the Aerojet Chino Hills facility. The contamination arose as a result of the facility's operations over the years, which consisted primarily of assembly and testing of various munitions and fuzes.

Laboratory analysis of soil, surface water and groundwater during the site investigation from 1995 through 1999 revealed contamination above human health based cleanup levels at ten locations throughout the Facility. The cleanup levels are established based on human health risks for the individual contaminant as well as a cumulative risk for all contaminants found at the Facility. Soil at five locations (SWMU #7, SWMU #8, AOCs #5, #7 and #9) is contaminated with the explosive chemical RDX. One of these locations (SWMU #7, former Redwater Pond) also contains 1,3,5-trinitrobenzene above cleanup levels. Elemental lead above cleanup levels was found in one sampling location in the former Landfill (SWMU #2) and dioxin above cleanup levels was found in one sample at one location (SWMU #1, Former Burn Area A). CS (tear gas) containing material has been found at two locations (SWMU #2 (Landfill) and SWMU #9 (Former Burn Area 18)). Soil at SWMU #1, SWMU #15, and AOC #6 contains ordnance, and needs to be excavated and transported to Area 1C for screening. A site map depicting the ten areas is included as Attachment J.

The Corrective Measures are being implemented to clean up the contamination at the Aerojet Chino Hills Facility and, when once completed, will reduce risks to human health and the environment on the facility to acceptable levels. The Corrective Measures consist of the following activities: 1) excavation and removal of below-ground concrete culverts from AOC #5 and AOC #9, 2) Excavation and mechanical screening of soil to remove UXO and ordnance fragments. This activity includes detonation of live ordnance items (if any are found) to render them safe for off site transport, 3) Excavation and off site transport (by truck) of soil containing explosive chemicals (RDX and 1,3,5-trinitrobenzene), lead and dioxin, 4) Excavation and off site transport of CS (tear gas) containing materials, 5) grading of soil at the former Landfill and Area 1C. Removal actions of culverts, contaminated soil and UXO will reduce the risk to human health and the environment from these contaminants. The cleanup levels for chemical contamination are based on the most conservative health risk scenario - residential land use

Several administrative and engineering controls are being implemented as part of the Corrective Measures to prevent adverse significant impacts to human health and sensitive plants and wildlife. These provisions include using water to minimize dust generation during excavation activities, and air monitoring and shut down of activities if dust levels exceed 10 mg/m^3 . Air monitoring will be required for project activities involving excavation of contaminated soil and CS (tear gas) containing material, and screening of soil for ordnance. Since toxic substances including explosive chemicals, CS (tear gas) and uranium adhere to the dust, air monitoring for dust and ceasing work if dust levels become excessive will provide adequate protection for worker's health as well as health of the off site community health. To minimize risk of fire from detonations, Aerojet will conduct detonations in accordance with standard Explosive Ordnance Disposal (EOD) practices while adhering to requirements established by the Chino Valley Fire District. These requirements minimize fire risk and include restricting detonations so that they are not performed when the combination of heat and wind or other factors would lead to increased fire risk. Detonations are being performed in a box canyon with walls eighty feet high located in the center of the facility. The shots are being limited to ten pounds net explosive weight, and will be buried 3 to 4 feet in soil. Past observations of this process have revealed that no significant quantities of dust resulting from the detonation escape out of the canyon. Grading and replanting with appropriate vegetation will adequately restore the natural landscape, thus reducing the possibility of erosion. DTSC believes these controls are sufficient to prevent any significant adverse impacts to human health and the environment.

Soil at the Facility contaminated with RDX (above health based cleanup levels) will be tested using a fish toxicity test (pursuant to Section 66261.24 of Title 22 of the California Code of Regulations) to determine

whether or not the soil is a hazardous waste. If the soil is determined not to be hazardous waste, it will be hauled off site in trucks with tarps. Trucks with "rollover" tarps will be used, and the tarping must fully enclose the truck bed. Section 23114 of the California Vehicle Code states that tarped trucks carrying contaminated soil may not have holes, cracks or openings through which dirt can escape; i.e. the truck "can't leak". Aerojet has been advised of this regulation, and they have agreed to decontaminate the trucks by dry brushing and inspect the trucks thoroughly before the trucks leave the facility. If the soil is found to be hazardous waste, the soil will be handled in accordance with the transportation requirements for hazardous waste (i.e. placed in sealed containers), and trucks with tarps will not be used.

In support of the community's concerns, the community will be notified in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) regarding the time frame for trucks leaving the facility with contaminated soil and of detonations of ordnance occurring at the facility.

To minimize impacts to sensitive plants and wildlife during excavation activities, a qualified herpetologist will conduct monitoring for the three sensitive reptiles known to potentially exist on site, the San Diego Horned Lizard, orange-throated whiptail and northern red diamondback rattlesnake. Mulefat, a riparian plant species, may also be present in the landfill creek if conditions are wet. If remediation activities impact mulefat, Aerojet will replant the impacted area with Mulefat once remediation activities in the landfill area are complete.

As a result of public comments received and changes in DTSC internal policy, DTSC has added a number of conditions of approval to the Corrective Measures, and is requiring Aerojet to complete additional work under Section X of the Consent Agreement. The Conditions of Approval and the requirements for additional work are included as Attachment B of this Response to Comments. Aerojet will be required to complete the additional work and provide documentation of the results to DTSC. The public will have an opportunity to provide input to DTSC on the results of this additional work prior to termination of Corrective Action. Several of the Conditions of Approval and the requirements for additional work are described in this section.

DTSC is continuing to evaluate the detection and removal activities for UXO at the facility. Additional ordnance sweeps/ordnance investigation may be required by DTSC as a result of our review of the Ordnance Sweep Reports submitted by McLaren Hart or as determined by McLaren/Hart based on present ordnance sweep efforts. An inspection to determine whether or not ordnance is present shall be conducted at the area along Soquel Canyon Creek, extending 200 yards beyond the gate at the southwest exit of the facility (Area of Concern). This requirement is being added to address community concerns.

DTSC's proposed cleanup goal for ordnance contamination is future residential land use, and we are in the process of developing residential performance standards for cleanup of UXO. We will have these standards in place prior to termination of Corrective Action, and will evaluate the cleanup of UXO at Aerojet in light of these standards. If the results our evaluation reveal that the ordnance detection and removal activities do not meet our standards for future residential land use, Aerojet will have the option of performing additional ordnance removal activities or considering an alternate land use. The public will have an opportunity to provide input to DTSC on our final land use decision based on the standards along with the results of the continuing ordnance sweep activities prior to termination of Corrective Action.

Based on information provided by USEPA, DTSC has become aware that the cleanup level for uranium set by DHS based on radioactivity is not adequately protective of human health based on toxicity to the kidney. Therefore, DTSC will evaluate existing site data for uranium at the facility to determine if the residential

scenario is still appropriate. Our cleanup goal for uranium is to future residential land use standards. However, if the results of our evaluation of the uranium data at the facility indicate that current levels of uranium at the site do not meet residential cleanup standards, DTSC will either require additional cleanup or require Aerojet to consider an industrial land use scenario if they do not wish to implement further cleanup. Please see the response to General Comment 4 for further information.

DTSC is requiring an evaluation of the pumpability of the contaminated groundwater at the location of the former Redwater Pond (58 foot zone) and at Upper A-12 Test Area. Based on the results of this testing, DTSC may consider a modification to the Remedy requiring the facility to pump the groundwater. However, preliminary groundwater sampling data collected to date at both the Redwater Pond and the Upper A-12 Test Area indicate that the water may not be pumpable, due to the small amount of water present, and the amount of time it takes to collect sufficient water for a sample (3 hours in one instance).

DTSC is also requiring additional testing of groundwater at the Upper A-12 Test Area, to verify that perchlorate is not migrating from this location, and testing of groundwater, if present, below the former Landfill (SWMU #2) for perchlorate.

Because present day ordnance detection methods cannot guarantee that all ordnance items have been removed from an area, DTSC is requiring Aerojet to submit a Long Term Operation and Maintenance Plan to ensure ongoing protection of human health and the environment with respect to ordnance. If, at the time of termination of Corrective Action, groundwater above health based cleanup levels remains at the Facility, DTSC will include provisions in this plan for groundwater monitoring over seasonal cycles to address migration issues, and provisions to prevent future users of the site from being exposed to the water. The public will have an opportunity to provide input to DTSC on the provisions of this plan prior to termination of Corrective Action.

The results from the additional work required may not require additional Corrective Measures. Once the field work has been completed, the results documented, and DTSC has completed its review of the results, the public will have an opportunity to provide input to DTSC on the results prior to termination of Corrective Action at the facility. If additional Corrective Measures are needed, additional CEQA documentation will be prepared, and the public will have a formal opportunity to provide input to DTSC on these additional measures as well.

III. RESOURCES

To obtain further information, individuals may contact one of the DTSC representatives listed below or review the documents associated with this project. The documents are located at the Chino Hills Public Library, 2003 Grand Avenue, Chino Hills, CA 91709, telephone number (909) 590-5830 and at the DTSC office in Cypress, 5796 Corporate Avenue, Cypress, California 90630, telephone number (714) 484-5300 (Please call to make an appointment). Project contacts are: Christine Brown, Project Manager at (714) 484-5382, Robert Senga, Unit Chief at (714) 484-5315 and Marsha Mingay, Public Participation Supervisor at (714) 484-5416.

IV. GENERAL COMMENTS

Responses to frequently asked questions/comments are provided below.

Comment 1:

Several commenters questioned the adequacy of the site investigation process—and asked for additional information about the Facility or the site investigation and decision process.

Response:

The Aerojet Chino Hills Facility is being investigated and cleaned up under section 25187 of the California Health and Safety Code, which is the state authority equivalent to the Resource Conservation and Recovery Act. The investigation and clean up process follows US Environmental Protection Agency (USEPA) guidance and is fully compliant with federal and state laws and regulations governing the investigation and cleanup of hazardous waste facilities. Preliminary information about the facility operations and waste management practices provided information about where potential releases occurred and what constituents should be analyzed. This information provided the basis for The RFI Work Plans detailing the investigation required to determine the nature and extent of contamination at each site within the facility. Extensive sampling and analysis of soil, sediments, surface water and groundwater have identified hazardous materials associated with the Aerojet Facility operations. The investigations have identified the nature and extent of contamination at each of the 29 Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). As part of the investigation and clean up process, health-based and environment-based cleanup goals were established for the chemicals of concern identified at the facility. The investigation process and results are documented in the RFI Workplans, the Health Risk Assessment (Section 7 and Appendix G of the RFI Report, and Sections 2 and 3 and Appendices A and B of the RFI Addendum Report), the RFI Report and the RFI Addendum Report.

At the beginning of the site investigation process, DTSC reviewed information from the U. S. Environmental Protection Agency and a number of other sources. The purpose of gathering this information is to determine the different types of hazardous chemicals used at the site and to identify locations where these chemicals may be present at the site. Subsequently, Aerojet provided additional information to DTSC in the RCRA Facility Investigation (RFI) Workplan and Current Conditions Report dated May 15, 1995, and in the RFI Report Addendum dated September 21, 1995. This additional information was collected from Facility files and from interviewing former employees. DTSC carefully evaluated the information provided for accuracy, consistency and completeness. As part of our investigation, DTSC also conducted a formal site visit to visually inspect the Facility to verify the information provided.

Based on the collected information, DTSC identified chemicals of concern that the facility needed to sample and analyze for during the site investigation. DTSC determined that explosive chemicals including RDX, 1,3,5-trinitrobenzene, propellants, perchlorate, semi-volatile organic chemicals (SVOCs), metals, volatile organic chemicals (VOCs), pesticides, dioxins, chemical agents and uranium are the chemicals of potential concern. In addition, DTSC also identified locations of possible chemical releases and contamination for testing of chemical contaminants. The field work was conducted by Aerojet's contractor, McLaren/Hart. The resulting RFI Report and RFI Addendum Report documented the work performed and the final revisions were submitted in January 1999 and February 1999 respectively. During the site investigation, DTSC provided regulatory oversight by evaluating the adequacy of the workplans, reviewing the accuracy of the reports and conducting site inspections to take random split samples for independent evaluation to verify laboratory sampling results. Split samples involve a sample collection process in

which a sample at a given location is collected, then "split" into two portions; one portion is analyzed by DTSC's Hazardous Material Laboratory, and the other analyzed at a laboratory chosen by the facility. The extensive site investigation at Aerojet revealed that several areas of the site require cleanup due to the presence of hazardous chemicals in soil above established cleanup levels as well as the presence of UXO in soil at several locations. Based on these findings, the Corrective Measures were proposed to clean up the contamination. The Corrective Measures are described in detail in the Corrective Measures Workplan. A copy of this workplan is available for review at the Chino Hills Library.

As stated, UXO has been identified as a contaminant of concern at the facility. DTSC has increased its regulatory role regarding cleanup of UXO since the proposed Corrective Measures were public noticed, and is presently reviewing the results of ordnance sweeping activities conducted by Aerojet's contractor over the past several years. In addition, DTSC is also involved in ongoing communication with Aerojet regarding progress of ordnance sweeps currently being conducted at the facility. Depending on the results of our review, and the present ordnance sweep efforts by McLaren Hart, additional ordnance investigation/sweeps may be required at the facility. Please see Section II for additional information regarding the UXO investigation.

Aside from UXO, DTSC is sensitive to community concerns. As a result, DTSC has added Conditions of Approval to the Corrective Measures as part of the approval of the Corrective Measures, and is requiring the facility to conduct additional work. The objective of the conditions of approval and additional work is to add extra measures to protect the community from adverse impacts during the Corrective Measure activities and to ensure that no additional contamination exists at the facility. An example of this is the requirement for additional air monitoring for dust during excavation activities. DTSC also is performing additional evaluation to further protect the community from residual risks. An example is the evaluation of uranium as a constituent of concern based on kidney toxicity. The details of the Conditions of Approval and additional work can be found in Attachment B.

Throughout the site investigation process, DTSC has maintained an effort to involve the public in our decision process. In the fall of 1996, DTSC conducted a community survey to determine the level of community interest in the project. Additionally, during the site investigation DTSC issued fact sheets to update the community on the status of the investigation. A fact sheet was mailed for the Aerojet project in the summer of 1998. Once the cleanup measures were proposed, DTSC public noticed the proposed decision and solicited formal public comments. After the public comment period ended, DTSC has evaluated all significant issues and responded to the comments raised by the community. DTSC is now providing these written responses to the comments received, along with the decision on the Corrective Measures. It is DTSC's policy to maintain an open channel of communication to the community we serve. DTSC will continue this effort throughout the Corrective Measures Implementation process.

Comment 2:

A number of commenters expressed concern regarding the incidence of cancer and birth defects in the community and stated that they believe the cancer and birth defects may have been caused by Aerojet facility operations.

Response:

The Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center has evaluated the occurrence of childhood neuroblastoma, childhood cancers and adult cancers in the Chino Hills area. The report summarizing the findings of the study, published in October 1999, concluded that there was no

evidence of an increased cancer rate for childhood neuroblastoma, childhood cancer or adult cancer in the Chino Hills area. This summary report is available for review at both the Chino Hills Library and at the Department of Toxic Substances Control office in Cypress. Members of the community with additional concerns regarding cancer may contact Dr. John Morgan of the Desert Sierra Cancer Surveillance Program of the Department of Health Services at 909-799-6181. Members of the community with concerns regarding birth defects may contact the California Birth Defects Monitoring Program at 1-888-898-2229.

The project under the direction of DTSC consists of Corrective Measures for the cleanup of contamination at the Aerojet Chino Hills facility. The cleanup is designed to limit and reduce future risks of adverse impacts to human health and the environment from chemically contaminated soil and UXO at the site. As part of the project, DTSC has evaluated the current environmental effects and risks to human health, of the present site conditions (See Revised RFI Report, section 7 and Appendix G, and RFI Addendum Report), and also has evaluated the project activities (See the Initial Study). Based on this evaluation, DTSC concluded that there would be no health risks to the community or to individuals off site from the present site conditions or the implementation of the Corrective Measures. Until the Corrective Measures are completed, trespassers onto the Aerojet Facility may run the risk of encountering unexploded ordnance or exposure to contaminated soil. The Corrective Measures will cleanup the facility and reduce future risks to on-site individuals. The cleanup goal of the Corrective Measures at Aerojet is for unrestricted, residential use of the property.

Please note, however, that health effects outside of the scope of the cleanup activities; i.e. health effects that may have resulted from past operations by Aerojet were not evaluated by DTSC because it is not part of the project and is outside the legal jurisdiction and expertise of DTSC.

Comment 3:

Several commenters requested that an Environmental Impact Report be prepared for this project.

Response:

Pursuant to Public Resources Code Division 13, Sections 21000 through 21177 and in accordance with the California Environmental Quality Act (CEQA), before DTSC can approve a project, it must conduct an environmental analysis to determine if approval of the project may result in significant adverse effects upon the environment. This environmental analysis, or Initial Study, contains factual evidence to support the finding concerning the impact of the project on specific aspects of the environment, including (among others) the impact on earth, animal life, air, land use, etc. The findings of the Initial Study are used as the basis for deciding whether an Environmental Impact Report (EIR) is warranted. If no significant impacts are found based on the findings of the Initial Study, the lead agency may adopt a Negative Declaration without conducting an EIR in accordance with the law.

DTSC's Initial Study for the Corrective Measures evaluated environmental effects and potential impacts to human health of a number of project activities including truck traffic, operation of heavy equipment, soil excavation and detonation. Based on the scope of the Corrective Measures activities and the procedures for implementing these activities, the Initial Study concluded that the project would not result in significant impacts that would adversely affect the environment or health standards. Therefore, a Negative Declaration was prepared and no Environmental Impact Report (EIR) is required.

Comment 4:

Several commenters stated questions regarding depleted uranium and radioactivity, including health effects, the site cleanup process used by the Department of Health Services and radioactivity in surface water at the facility.

Response:

Cleanup of depleted uranium (DU) at the Aerojet Chino Hills facility based on health risk due to radioactivity has been proceeding under the jurisdiction of the Department of Health Services, Radiologic Health Branch (DHS), since 1992. DTSC has recently become aware that the limiting health effect for uranium, particularly depleted uranium, is toxicity to the kidney, not cancer due to radiation. The kidney toxicity of uranium is related to heavy metal toxicity (i.e. similar to the effect of cadmium on the kidney). The U.S. Environmental Protection Agency (USEPA), provided documentation of the toxicity to the kidney in the 1991 proposed Radionuclide Drinking Water Standards published in the July 1991 Federal Register. In the April 21, 2000 Federal Register, USEPA provided updated information about the drinking water standards, including a new lower reference dose.

In light of the above information, DTSC has determined that it is within its jurisdiction to regulate uranium under Section 25187 of the California Health and Safety Code as a toxic heavy metal. We are therefore adding uranium as a constituent of concern under Corrective Action at the Aerojet facility. The requirement for the evaluation of uranium at the facility is included in the Conditions of Approval for the Corrective Measures. Based on the updated information provided by USEPA, DTSC will evaluate existing site data on uranium to determine if these levels are adequately protective of human health based on a residential future land use scenario. The existing site data will be converted from units of radioactivity (pCi/L) to mg/kg for health risk assessment purposes. The same health risk approach as that for evaluating explosive chemicals as presented in the RFI and RFI Addendum Reports will be used. DTSC will also require Aerojet to evaluate surface water and subsurface water for the presence of uranium and may require additional soil sampling. If the results of this evaluation reveal that uranium is present in surface water, DTSC will require Aerojet to conduct an ecological assessment of uranium. DTSC will be utilizing the expertise of DHS to assist in evaluating the uranium site data and in reviewing any workplans and reports that would be required as a part of the investigation. If the existing levels of uranium at the site are not adequately protective of human health under a future residential land use scenario, Aerojet will either need to perform additional cleanup or consider an alternative land use with deed restrictions.

DTSC believes that levels of uranium presently on site conditions do not present a health risk to the community. Based on the results of the Health Risk Assessment, contaminants are not migrating off the site at levels that would impact human health and the environment. Some dust from soil containing constituents of concern may be swept up by the wind and carried off site. However, the Health Risk Assessment demonstrated that the amount of this dust than an on site person would breathe is so small that no adverse health effects would result. Thus, a person off site would not be impacted in any way by this dust. Please see the response to General Comment 6 for further information on the Health Risk Assessment.

For information on the health effects of uranium due to radiation or the cleanup being conducted under the jurisdiction of DHS, please contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360.

Comment 5:

Several commenters posed questions regarding how to obtain a Technical Assistance Grant (TAG).

Response:

A Technical Assistance Grant (TAG) for the formation of a Community Action Group is not available for corrective action projects. The TAG is only available to CERCLA sites and Aerojet is not a CERCLA site. However, DTSC representatives are willing to attend meetings for the purpose of educating and assisting the public.

Comment 6:

Many commenters had questions regarding the health effects of hazardous chemicals at the Aerojet site.

Response:

The constituents of concern at the facility that have been detected at the facility above health based cleanup levels are RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine), 1,3,5-trinitrobenzene or (also referred to as 1,3,5-TNB), lead, dioxin. Lead above cleanup levels has been found at one location in the Landfill (SWMU #2) and dioxin has been found at two locations in trace amounts, SWMU #1 and SWMU #9, with the level in SWMU #1 above health based cleanup levels. These cleanup levels have been established by the Health Risk Assessment for a future residential land use scenario. All areas with RDX, 1,3,5-trinitrobenzene (former Redwater Pond only), lead (SWMU #2) and dioxin (SWMU #1) above cleanup levels will be cleaned up as part of the corrective measures. Perchlorate and HMX are also constituents of concern, although both chemicals have not been found at the facility at concentrations exceeding those considered safe for human health or wildlife. CS (tear gas)-containing materials have been found at two locations (SWMU #2, Landfill and SWMU #9, Former Burn Area 18). Uranium has also been added as a constituent of concern. Please see the response to General Comment 4 for further information.

The cleanup levels for chemicals of concern at Aerojet have been established through a Health Risk Assessment for an unrestricted, residential land use scenario. This Health Risk Assessment is documented in Section 7 and Appendix G of the RFI Report, and Sections 2 and 3 and Appendices A and B of the RFI Addendum Report. A Health Risk Assessment is a conservative, mathematical approach to quantify the potential risks from the contaminants of concern. The Health Risk Assessment takes into consideration the potential exposure pathways in which the chemical can be introduced into the body. Part of the Health Risk Assessment for the Aerojet facility evaluated human health effects to an on-site resident from air (inhalation of particulates) and concluded that these effects were within the generally acceptable range and that the majority risk (99.8%) of the risk is through possible contact with soil (ingestion, skin absorption). Human health effects from RDX, HMX and perchlorate detected in surface water (incidental ingestion and skin absorption) were evaluated in the RFI Report Addendum and found to be insignificant. Information on health effects of the eight chemicals mentioned above is included in Attachment C. The public health statements for RDX, HMX, 1,3,5-trinitrobenzene, uranium, lead and dioxin were taken from the toxicological profiles prepared by the Agency for Toxic Substances and Disease Registry (ATSDR). You may wish to contact the ATSDR information line at 1-888-422-8737 for further information.

Comment 7:

Many commenters had questions regarding the geology underlying the site, sampling results for surface water and groundwater, and impacts of the contamination at Aerojet on area drinking water supplies.

Response:

The rock formation underlying the site consists of low permeability bedrock (i.e. the rock does not have the capability of holding groundwater). Groundwater under the site consists of localized areas of interflow water and water in fractures. Depth to groundwater ranges from 800 feet in abandoned oil wells to 100 feet in two on site wells used for nonpotable purposes. Groundwater at the site is not connected to groundwater in the Chino Basin or any other adjudicated groundwater supply. The Chino Basin lies upgradient of the site; therefore the localized contaminated groundwater at the facility does not have the potential to adversely impact area drinking water supplies.

Surface water is contaminated with RDX, HMX and perchlorate in one surface drainage running south along the western portion of the facility. This drainage veers west when it reaches Lake Aerohead, runs past the Landfill (Landfill creek) and ultimately joins Soquel Canyon Creek at the southwest exit of the facility. The source of the RDX and HMX is believed to be the former Redwater Pond, and the source of the perchlorate is believed to be the Upper A-12 Test Area. A perchlorate level of 83.2 ug/L was detected in Soquel Canyon Creek where it exits the facility to the southwest; however, testing 1.75 miles downstream revealed no contamination. The Health Risk Assessment has determined that the levels of RDX, HMX and perchlorate in surface water do not pose a risk to human health or the environment. Please see Section 3 of the RFI Addendum Report for further information.

In addition, sediments in two drainages off site to the north of the facility have also been tested for explosive chemicals, chemical agents and CS (tear gas) and the test results revealed that no contamination was present. These results are reported in Section G of the RFI Addendum Report and are included as Attachment G to this Response to Comments.

Groundwater has been tested at several locations on the site. Test results for groundwater at the former Redwater Pond (SWMU #7) revealed explosive chemicals including RDX and HMX in groundwater at 35-40 feet below ground surface and 58 feet below ground surface. Preliminary test results from monitoring wells installed downgradient of SWMU #7 revealed that the contamination had not migrated.

Test results for groundwater at the Upper A-12 Test Area revealed perchlorate contamination at 35-40 feet. Aerojet will be required to conduct additional work at the Upper A-12 Test Area in order to evaluate whether or not migration of perchlorate has occurred.

In addition to testing at the former Redwater Pond and Upper A-12 Test Area, three on site wells and one off site well, the Sikkama Well were tested. The wells were tested for explosive chemicals, perchlorate, inorganic chemicals and metals. Depth to groundwater in the on site wells ranged from approximately 125 feet (Area 1 Well) to approximately 800 feet in the Walking Beam Well. Test results for all wells indicate that contamination has not reached groundwater at these locations, and that the contamination has not migrated off site. The results of the groundwater sampling are documented in Section 3 of the RFI Addendum Report.

For further information on the geology and hydrogeology of the site, and on the results of the surface water and groundwater sampling conducted at Aerojet, please see the memo prepared by Mr. Paul Carpenter of DTSC, project geologist, included as Attachment D.

Comment 8:

Many commenters had concerns regarding the potential air emissions from the proposed project activities, and whether or not these emissions would adversely affect the community.

Response:

The potential air emissions from the project involve dust generated from excavation and soil screening activities, emissions from off road vehicles and passenger cars including Reactive Organic Gases (ROG), Nitrogen Oxides (NOX), Carbon Monoxide (CO), and PM₁₀, and emissions from detonations. The following discussion on dust generation from excavation/soil screening and emissions from vehicles is taken from the Initial Study, with the calculations for emissions from off road vehicles updated based on discussions with South Coast Air Quality Management District. The conclusion from the Initial Study, that air emissions from the project remain below SCAQMD thresholds for an Environmental Impact Report, remains valid.

The six remedial activities for which air emissions were evaluated are: 1) excavation and removal of below-ground culverts, 2) excavation and screening (also referred to as sifting) of soil to remove ordnance, and detonation of ordnance, 3) excavation and off site transport of chemically impacted soil 4) excavation and off site transport of CS (tear gas) containing material, 5) grading of soil and SWMU #2 (former Landfill) and Area 1C, and 6) passenger automobile trips to and from the site.

To estimate whether or not these operations will be significant from an air quality point of view, emissions in lb/day from operation of vehicles from the six activities were according to guidance provided by the South Coast Air Quality Management District. The first five activities involve emissions from off road vehicles and tractor-trailer trucks (off site transport of contaminated soil). Emissions from detonation are discussed separately.

Emissions calculations for reactive organic gases (ROG), carbon monoxide (CO), nitrogen oxides (NO_x), and PM₁₀, were calculated and compared to South Coast Air Quality Management District thresholds of significance taken from the CEQA Air Quality Handbook. These thresholds trigger the preparation of an Environmental Impact Report if the project activities exceed the thresholds. The thresholds are as follows: 55 pounds per day of reactive organic gases (ROG), 100 pounds per day of nitrogen oxides (NO_x) for construction activities, 550 pounds per day of carbon monoxide (CO) and 150 pounds per day of particulates (PM₁₀).

Emissions calculations are based on formulas from Chapter 9 of the CEQA Air Quality Handbook, emissions factors for autos and dirt-hauling tractor-trailer trucks from database EMFAC7G, year 1998, and emissions factors for off-road equipment from the Nonroad Engine and Vehicle Emission Study Report published by USEPA in 1991. The calculations are included as Attachment E to this Response to Comments and a summary of the calculations is presented below.

The following table summarizes the emissions of reactive organic gases, carbon monoxide, nitrogen oxides and PM₁₀ for six of the remedial activities:

Activity (Duration)	ROG (lb/day)	CO (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)
removal of culverts (1 week)	7.0	34.2	75.9	1.2
excavation, mechanical screening of soil (11 weeks)*	4.4	24.3	52.7	31.2
excavation, off site transport of chemically contaminated soil (3-4 weeks)	9.0	51.2	96.3	34.2
excavation, off site transport of CS-containing material (3-4 weeks)	2.5	12.8	23.0	29.2
Grading of soil (4 days)	7.3	41.6	88.0	88.2
Passenger automobiles (3-4 months)	0.27	4.55	0.49	0.01

*Time-weighted average

The emissions for the excavation and mechanical screening activity were calculated as time-weighted averages because this activity will use multiple vehicles (ten total) for different durations (1 week to 11 weeks). For the individual activities, emissions of ROG, CO, NO_x and PM₁₀ are below the thresholds of significance. For the two activities conducted simultaneously (removal of CS-containing material and excavation, screening of soil in Area 1C), the combined emissions of ROG, CO, NO_x and PM₁₀ do not exceed the thresholds of significance.

The following schedule of activities will be followed to prevent emissions from off road equipment from exceeding the SCAQMD thresholds. Removal of the concrete culverts will take place first. Following that activity, excavation of RDX-contaminated soil at the former Redwater Pond and other locations will occur. Following the excavation of the RDX-contaminated soil, both the excavation of CS (tear gas)-containing material, including excavation of the Landfill, and excavation and screening of soil in Area 1C to remove ordnance will occur simultaneously. Detonation of ordnance, if needed, will occur following the completion of the soil screening activity. Grading of the Landfill and Area 1C will occur after the soil screening activity is complete.

Detonations, if needed, will be conducted in Area 16. Shots will be limited to 10 pounds net explosive weight each and will be buried in soil at a depth of approximately three feet. Several shots will be conducted per day. Up to 200-400 pounds total net explosive weight will need to be detonated over a one to three week period, with the average net explosive weight detonated per day of 50 pounds. Detonation is a highly energetic, efficient chemical reaction, which converts the starting material (TNT, RDX etc) to primarily carbon dioxide (CO₂), carbon monoxide (CO), carbon (soot), reactive organic gases (ROG), nitrogen gas (N₂), nitrogen oxides (NO_x) and water. Based on information provided in the reference by Dr. William Mitchell of USEPA, expected emissions per day from the underground detonation of 50 pounds net explosive weight (n.e.w.) (5 shots) would be 10-15 pounds carbon monoxide, 1-2 pounds NO_x and less than 1 pound ROG. Since the detonation occurs underground, PM₁₀ emissions would be formed primarily

from soil thrown into the air by the detonation. Based on information provided in the reference by Hoock, less than 1 pound of PM₁₀ per day would be formed from detonation of 50 pounds n.e.w.

- Ref: CEQA Air Quality Handbook, South Coast Air Quality Management District
McLaren/Hart Revised RFI Report, Corrective Measures Workplan, 1999
EMFAC7G Database for 1998, California Air Resources Board
Nonroad Engine and Vehicle Emission Study--Report, USEPA, EPA-21A-2001, November 1991
Mitchell, W.J. "Emission Factors for the Disposal of Energetic Materials by Open Burning and Open Detonation (OB/OD). EPA/600/R-98/103. August 1998.
Hoock, D.W. et al, 1987. Combined Obscuration Model for Battlefield-Induced Contaminants (COMBIC). U.S. Army Laboratory Command. October

V. RESPONSES TO LETTERS ADDRESSED TO DTSC

Letters addressed to DTSC were received from numerous individuals or groups. Response to comments were organized alphabetically for private individuals followed by comments from groups or agencies as follows:

- ▶ Androus, Scott; May 28, 1999
- ▶ Brock, Candice; May 26, 1999
- ▶ Dobrikin, Carol (et. al.); June 28, June 30, July 27, and July 28, 1999
- ▶ Goodenough, Douglas & Stacey; May 26, 1999
- ▶ Hernandez, Andre; May 6, 1999
- ▶ Hokom, Wayne S.; May 24, 1999
- ▶ Kerr, Raymond & Heidi; June 27, 1999
- ▶ Mikels, Marjorie; May 28 and June 30, 1999
- ▶ Miller, Todd & Karen
- ▶ Morton, Judy May 25, May 28, and June 30, 1999
- ▶ Sloss, Kimberly; June 24, 1999
- ▶ Steinseifer, Suzanne E.; May 26 and June 4, 1999
- ▶ Unrein Mary; June 16, 17, and 20, 1999
- ▶ VanBarriger, Glenn; June 25, 1999
- ▶ Physicians for Social Responsibility; June 30, 1999
- ▶ Chino Valley Unified School District; June 29, 1999
- ▶ State of California, Department of Conservation; May 12, 1999
- ▶ State of California, Department of Parks and Recreation; May 12 and 19, 1999
- ▶ City of Chino Hills, June 29, 1999
- ▶ State of California, Department of Transportation; May 3, 1999

To facilitate the response to these comments, the content of each party's letter is shown in ***bold italics*** followed by our response. Each respondent comment(s) is included in full with the exception of personnel references, such as addresses and telephone numbers, and greetings/salutations. Some typos and misspellings were corrected. In some cases, similar questions were asked by more than one commenter. To minimize the size of this document, some responses to comments are directed to other responses to similar concerns and also to the General Comments included in Section V.

Questions and Comments Submitted by Scott Androus, May 28, 1999

Thank you for your time and input at the Aerojet meeting Tuesday May 25, 1999. I await the information you are sending me regarding the meeting held by the DTSC May 13, 1999. I am writing with concern not only about the site clean up, just with regard to the storage, assembly, disbursement, testing and disposal of ordnance chemicals, and depleted uranium during the years prior to the closure of the plant in 1995.

I have lived in Chino Hills since September 1987. In August of 1992 my first son arrived and in March 1994 my second son arrived. My life seemed charmed, until May 1997 when testing of my youngest son, Joey, revealed a severe speech delay. Since then Joey has received speech therapy, special education, and an endless series of medical tests. In December of 1998, I received some tragic news. Genetic testing revealed a micro deletion on his second chromosome. The geneticists said that it is rare, so much so that no match has been found anywhere in the world. The geneticist refer to it as de novo. They have also called it a spontaneous mutation. I hope you can now understand my concern. I therefore request the following information.

1. *A list of all materials and their quantities that were stored, assembled, disbursed, tested, and disposed of on the Aerojet Chino Hills site from 1954-1995.*

As reported in the *Current Conditions Report* (McLaren/Hart, May 15, 1995), waste managed at the Facility consisted primarily of explosive chemicals (primarily RDX, TNT and perchlorate), propellants, proprietary organic chemicals, and included lesser amounts of x-ray process chemicals, lubricating oils, solvents, and paint. Unexploded ordnance was also a waste managed at the facility. Since environmental laws did not exist in the early operational years of Aerojet, the exact quantity of these materials used is unknown. A list of materials (Table 3-1 in the *Current Conditions Report*), included as Attachment F, is a representative list of waste materials generated at the Facility.

All information regarding: current McLaren Hart facility cleanup, recent depleted uranium clean up, 1980 caustic pond cleanup. Including all test results, sub-contractor listings, materials removed and disposal sites.

This information is contained in the following reports. These reports can be found in the information repository in the Chino Hills Library and at the DTSC office in Cypress, California.

Corrective Action Cleanup:

1. Current Conditions Report and RCRA Facility Investigation Workplan at the Aerojet Chino Hills Facility, Volumes 1 and 2, dated May 15, 1995.
2. RCRA Facility Investigation Workplan Amendment at the Aerojet Chino Hills Facility, dated September 21, 1995.
3. Phase II RCRA Facility Investigation Workplan for the Aerojet Chino Hills Facility, dated December 15, 1995.
4. Investigation of Former Redwater Pond (SWMU #7) Aerojet Chino Hills Facility, dated January 29, 1998.
5. Phase III RCRA Facility Investigation Workplan Aerojet Chino Hills Facility, dated August 4, 1998

5. Phase IV RCRA Facility Investigation Workplan Aerojet Chino Hills Facility, dated November 3, 1998.
7. Revised RCRA Facility Investigation Report at the Aerojet Chino Hills Facility, Volumes 1 and 2, dated January 20, 1999
8. RCRA Facility Investigation Addendum Report at the Aerojet Chino Hills Facility, Volumes 1 and 2, dated February 10, 1999.
9. Revised Corrective Measures Workplan at the Aerojet Chino Hills Facility, dated February 11, 1999

Depleted Uranium Cleanup under jurisdiction of the Department of Health Services, Radiologic Health Branch:

1. Aerojet Ordnance Chino Decontamination Activities, dated April 1993
2. D&D of Aerojet Chino Hills Facility, License No. 1450-36, dated February 1996

Caustic Ponds Cleanup:

Information regarding the Caustic Ponds cleanup is located in Appendix D of the Revised RFI Report.

2. ***All information regarding: open burn and detonation disposal. Including all test results, sub-contractor listings, materials and their quantities burned detonated, and disposal sites.***

Information on the open burn/open detonation (OB/OD) Cleanup is available in the following reports:

1. Closure Plan for OB/OD Units for Aerojet Ordnance, Chino, California, Revision 2, March 9, 1993
2. Open Burn/Open Detonation Units RCRA Closure Project, January 1996
3. Stockpile Sampling and Analysis Report for Chino Hills OB/OD Area, January 27, 1997

These three reports are available at the information repository at the DTSC office in Cypress, California and the Closure Plan is available at the Chino Hills library

3. ***All Aerojet manuals regarding storage, assembly, disbursement, testing, shipping, and disposal of all materials on site beginning in 1954 including all revisions, addenda, and changes made through closure 1995.***

DTSC does not have Aerojet's manuals, however, Aerojet files, which included the information mentioned above, were reviewed in 1994 and 1995. The purpose of reviewing this information was to identify locations on the facility where hazardous waste may have been released into soil, surface water or groundwater. This information was summarized and incorporated into the Current Conditions Report and the RFI Workplan. The information included the types of hazardous chemicals/wastes handled at Aerojet and the hazardous waste management practices including storage and disposal of hazardous waste. DTSC reviewed this information and deemed it adequate when it approved the Current Conditions Report and RFI Workplan in 1995.

4. ***All Department of Defense training manuals, field manuals and guide lines regarding storage, assembly, disbursement, testing, shipping, and disposal of all materials on site beginning in 1954 including all revisions, addenda, and changes made through closure 1995.***

Facilities under contract with DOD must comply with all applicable, or relevant and appropriate laws and regulations pertaining to storage, treatment and disposal of hazardous waste. DTSC believes that the RFI process, including the file review, employee interviews and site investigation have provided adequate documentation of the contamination existing at the facility. Therefore, DTSC does not deem it necessary to review DOD training manuals or field manuals to evaluate the nature and extent of contamination at Aerojet. If you wish to obtain copies of DOC documents directly, please visit the DOD web site at www.defenselink.mil.

The inability of Aerojet to fully disclose all materials on site, leaves them suspect. The fact that only five previous employees were interviewed over a forty one year period of operation is scandalous. Aerojet had an obligation to provide whatever measures necessary to protect the residents of Chino Hills. You commented May 25 that the DTSC was watching Aerojet like a hawk. But where was the DTSC from 1954 to 1995. The site map and its contamination exposed Aerojet's dereliction. Thank you for your time and assistance.

DTSC acknowledges your concern regarding Aerojet's past operations and possible health impacts on the community. It is DTSC's role and responsibility to protect human health and the environment to the extent mandated by the hazardous waste laws and regulations as stated in the California Health and Safety Code and Title 22 of the California Code of Regulations. The national hazardous waste law, the Resource, Conservation and Recovery Act, or RCRA, was enacted in 1976 and went into effect in 1981. Prior to that time, regulation of hazardous waste was minimal. The California Hazardous Waste Control Law was passed in 1980 and the Toxic Substances Control Program (TSCP) under the Department of Health Services was the implementing authority. The State of California did not oversee regulation of hazardous waste prior to enactment of that law. In 1992, the TSCP became DTSC. DTSC has increased its regulatory oversight function over the years as more laws and regulations went into effect and as knowledge of safe management practices increased. DTSC's mission is to regulate and control hazardous waste and the clean up of released hazardous substances that negatively impact human health or the environment.

The scope of the present project at Aerojet (Corrective Action), focuses on present site conditions and any current associated public health risks, and cleanup of contamination at the facility and any future public health risks related to the cleanup. Past operations are considered only to the extent that they may have contributed to present site conditions. DTSC has determined that present site conditions do not pose health or safety risks to individuals off site. This determination is based on the results of the Health Risk Assessment. Trespassers on the site may run the risk of encountering unexploded ordnance or contaminated soil until the site is remediated. DTSC is requiring Aerojet to take the appropriate measures to ensure that the Corrective Measures do not jeopardize health or safety risks to the community. Please see Section II of this Response to Comments for further information. Please note that the meeting held May 25, 1999 was hosted by Aerojet, not DTSC. DTSC held its public hearing on May 13, 1999. DTSC will continue to oversee Aerojet's site clean up with respect to contamination of the soil, water and air.

Questions and Comments Submitted by Candice Brock, May 26, 1999

I enjoyed speaking with you as I was leaving the Aerojet Public Meeting last night. As I mentioned last night, I have been a resident of Chino Hills since February of 1985. My first home was on Sprig Street and my second home was on Tern Street.

In February of 1994 I was diagnosed with Hodgkin's Disease, which is a cancer of the lymphatic system. At the time of my diagnosis, my doctors at the City of Hope Medical Center and my local Chino Hills doctor informed me that Hodgkin's is considered an "environmental" cancer.

The Aerojet plant on the top of the hill has been a concern of mine for some time and after attending Tuesday's meeting, it has become a greater concern to me; not only because this plant could be connected with my health problems, but also that it could have caused other residents in our community health problems.

I would be very interested in receiving any information you have available on this subject. I would also be willing to speak with you at anytime.

As mentioned earlier, DTSC takes the health concerns of the community very seriously. As stated in the response to general comment 2, the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center evaluated the adult cancers in the Chino Hills area and the study concluded that the cancer rates in Chino Hills are not above the cancer rates for the standard population. You may wish to consult the summary report of these findings, which is available for review at both the Chino Hills Library and at the Department of Toxic Substances Control office in Cypress. You may also wish to contact Dr. John Morgan of the Desert Sierra Cancer Surveillance Program of the Department of Health Services at 909-799-6181 for further information. Please note that the meeting held May 25, 1999 was hosted by Aerojet, not DTSC. DTSC held its public hearing on May 13, 1999.

Questions and Comments Submitted by Carol Dobrkin, Noreen Gissel, and Candace Irelan; June 28, 1999

Thank you for extending both the time frame for public input and the geographical area surrounding the Aerojet project that you are willing to look at. We have recently discovered the Reservoir 6 on the Catellus Hilarides Ranch site is shown on the water project map as an uncovered reservoir. Reservoir 6, covered only by a tarp or canvas, is downwind of, adjacent to, and below the Aerojet site.

Chino Hills Water Department representatives have stated that the city water is tested for perchlorates, which many residents are concerned about, before entering that reservoir. However, because of the potential for airborne contaminants to reach the reservoir, it is possible for you to check the sediment at its bottom as well as the surrounding silt deposits?

The local Santa Ana winds which seasonally affect our area could easily transport contaminants (such as radioactive depleted uranium sand) to the site of the proposed Catellus residential development where Reservoir 6 is located. The fire department's designation of the site as an "extreme risk fire corridor" suggests its vulnerability as an active wind corridor as well.

According to the City of Chino Hills Water Facilities Plan and Mr. Ken Hackman, Water Production Supervisor for the City, Reservoir No. 6 is a one million-gallon storage tank for drinking water. The tank is constructed with reinforced concrete, completely enclosed with a concrete roof. Only two small exhaust vents allow exposure to outside air. Mr. Hackman said that sediments do accumulate in these types of tanks but they originate through the pipelines. Since the tank is covered, the potential for airborne contaminants to contaminate the water in this

reservoir is minimal. Therefore, DTSC does not believe sampling the sediments for constituents of concern at the Aerojet facility is warranted.

**Questions and Comments Submitted by Carol Dobrikin, Jordan Dobrikin, and Frank P. Burns;
June 30, 1999**

We have found 2 more Chino Hills reservoirs that may have been subject to air borne contaminants. They are reservoirs R-17 and R-4 at the top of Valley Springs Road, about 5,000 feet north and east of the main group of Aerojet buildings. There used to be only one tarp covered reservoirs there, now there are 2 enclosed reservoirs servicing that area. However, when only the 1 reservoir was there, we have seen and smelled stuff on the road leading to it that made us uncomfortable at the time.

We would appreciate it, if you could check out the sites of those two reservoirs and TAT road leading to them for possible air borne contaminants from Aerojet.

According to the City of Chino Hills Water Facilities Plan and Mr. Ken Hackman, Water Production Supervisor for the City, Reservoir Nos R-4 and R-17 are also enclosed reservoirs. Mr. Hackman said that sediments do accumulate in these types of tanks but they originate through the pipelines, not through air-borne materials. DTSC believes that the potential for airborne contaminants to contaminate the water in this reservoir is minimal, and that sampling the sediments for constituents of concern at the Aerojet facility is not warranted. DTSC presumes that the reference to "Tat" road refers to the road leading to the reservoirs. Based on the results of the sampling data collected on site and off site north of the facility, there is no evidence that the contamination has migrated off the facility in significant quantities. The results of the off site sampling are included as Attachment G of this Response to Comments.

Questions and Comments Submitted by Carol Dobrikin; June 27, 1999 (letter dated July)

We are also looking for a rancher who can show us the site rented by Aerojet where he experienced throat irritation- and his cattle showed distress that correlated with the loud booms when, representing testing of something that caused immediate and strong air pollution.

Per conversation between Christine Brown and McLaren/Hart representative Joe Bahde, only one cattle rancher grazes his cattle on the Aerojet property. In an informal conversation between Joe Bahde and the rancher, he stated that he has not experienced throat irritation nor has his cattle showed distress that he could correlate to Aerojet operations.

Questions and Comments Submitted by Carol Dobrikin; June 28, 1999 (letter dated July)

Thank you for extending both the time frame for public input, and the geographical area surrounding the Aerojet project that you are willing to look at.

We have recently found out that Reservoir 6, on the Catellus Hilarides Ranch site, down wind from, adjacent to and below the Aerojet site, is shown on the water project map as an uncovered reservoir, covered only by a tarp or canvas. Even though the Chino Hills Water Department representative stated that the city water was tested for the perchlorates that many residents are concerned about before going into that reservoir, it is possible for

ou to check the sediment at the bottom of that reservoir, and the sand and silt surrounding it for many and all possible long lasting airborne contaminants that may still be there. The local Santa Ana wind which regularly mows down trees, could easily carry the radioactive depleted uranium sand to site for the proposed Catellus residential development, on which reservoir 6 now sits, which the fire department has designated as an Extreme Risk Fire corridor, and therefore a Wind Corridor.

Thank you again for the excellent job you are doing to correct the safety factors that your predecessors, and the city staff may have overlooked to minimize the contamination on the site, and to the surrounding areas during the removal of some of the contaminants and to make available, via the public library, the levels of contamination removal or correction that the state requires.

Please see your earlier comments on pages 17-18.

Questions and Comments Submitted by Carol Dobrikin July 29, 1999

There is a major flaw showing access to the site from Carbon Canyon Dam thru Orange County's Soquel Canyon, west of the site, which was removed from the map 2 years ago, because it was too steep and hazardous to drive. There is another canyon, east of the site incorrectly called Soquel Canyon.

The original city map incorrectly showed through access from the 71 freeway to Brea in north Orange County, instead of 2 disconnected canyons separated by the Aerojet site. I didn't mean to imply that the map of the site was incorrect.

The information presented on the Facility map was derived from US Geological Survey topographic maps of the region, not from the City's proposed access route map. There is a dirt road connecting Carbon Canyon Road to the Facility through Soquel Canyon; however, this road is inaccessible to the public. There are two gates on this road. One gate is located adjacent to Carbon Canyon road, south of Sleepy Hollow, and the other gate is located on the Aerojet property line, near the former Landfill (SWMU #2). Aerojet locks this second gate; thus, access to the facility from this road is barred.

Questions and Comments Submitted by Douglas & Stacey Goodenough; May 26, 1999

My family has one request. Do the right thing. Not the easiest, the least expensive, the less challenged, just the right thing.

Fight for the children who innocently breathe in the summer air as they play in their yards. Fight for the children as they brush their teeth before the bedtime prayers. Fight for the children who have to suffer the consequences of decisions made by some greedy or ill-advised or lazy representatives. Fight for the parents who try so hard to protect our little ones from everyday harm only to find there are toxic dangers in our own backyards.

Let's do it right. Let's live honestly and honorably. Let's protect our precious children.

Comment understood. DTSC takes the health concerns of the community very seriously. DTSC has made a diligent effort to ensure that the site investigation and the health risk assessment have been conducted to meet stringent requirements. DTSC is also requiring administrative and engineering controls to be implemented as part of the Corrective Measures to prevent adverse impacts to human health and the environment. DTSC will take appropriate actions to protect both the environment and human health when data suggests that these steps are

necessary. DTSC believes that, with the provisions listed in the Corrective Measures Workplan and the Conditions of Approval for the Corrective Measures that DTSC added to the decision, we are protecting the community. For further information on DTSC's process and the Corrective Measures, please see response to General Comment Nos. 1, 2, and 6 and the project description at the beginning of this Response to Comments.

Questions and Comments Submitted by Andre Hernandez; May 6, 1999

In an article published in the Chino Hills Champion newspaper Thursday April 22, 1999 it reported how unexploded projectiles were found buried beneath the Aerojet compound located in Chino Hills. This article came to my attention because I am a resident living in the vicinity of the facility.

The purpose of this letter is to inquire what the state and the company are doing to correct this problem and how to prevent a reoccurrence in the future? I knew little about the Aerojet ordinance company when I moved here; actually I thought it was an abandoned missile silo. Recently I also read that McLaren-Hart Environmental Engineering company and the Department of Toxic Substance control had uncovered depleted uranium, perchlorate, and teargas canisters buried in the Aerojet compound. I became curious as to Aerojet's production story. I was startled to read that Aerojet tests anti-personnel liquid-explosive mines used in wartime. I have several questions which I hope you can answer.

Do the prevailing conditions at Aerojet threaten the diversity of plant and animals species that inhabit the surrounding areas?

A biological survey was conducted to determine if current conditions at the site pose a risk to plant or animal species inside or nearby the Facility. The survey identified several sensitive habitats and special-status wildlife species at the site and determined that the implementation of corrective measures should not adversely affect these receptors. They, however, did recommend that a qualified herpetologist conduct pre-construction and construction monitoring for the orange-throated whiptail and the northern red diamondback rattlesnake that may be present at the Facility in low numbers. The only area impacted by the Corrective Measures where known sensitive plant species may be present is the area near the landfill creek, which is a riparian area (water may be present during part of the year). Mulefat, a sensitive plant species, may be present when the area is wet. The Department of Fish and Game has been consulted, and they will require Aerojet to replant any impacted areas if the excavation impacts mulefat. DTSC believes that there is no threat to plant or animal species that inhabit the area with respect to chemical contamination and that implementation of the Corrective Measures with the requirements mentioned above will prevent any significant impacts to the sensitive animal or plant species.

An ecological risk assessment was conducted on the explosive chemicals RDX and perchlorate detected in surface water. This assessment demonstrates that the highest levels of compounds detected in the water do not pose a risk to ecological receptors.

As mentioned in the response to General Comment 4, DTSC is evaluating present levels of uranium at the site. If uranium has impacted surface water, DTSC will require Aerojet to evaluate any potential adverse health effects of uranium in surface water on wildlife.

And what is Mrs. Edie Cartwright's (Aerojet's spoke person) doing to comply with the state mandate during the last 18 months.

Aerojet has been in compliance with DTSC's mandate to investigate the Facility as described in the Corrective Action Administration Agreement on Consent (Consent Agreement).

Considering the consequences has the contamination spread anywhere else? How long will it take to clean up the mess? Please keep me informed.

Based on the results of the Health Risk Assessment, contaminants are not migrating off the site at levels that would impact human health or the environment. Some dust from soil with contaminants above cleanup levels may be swept up by the wind and carried off site. However, the Health Risk Assessment demonstrated that the amount of this dust that an on site person would breath is so small that no adverse health effects would result. Thus, a person off site would not be impacted in any way by this dust. Please see the response to General Comment 6 for further information on the Health Risk Assessment.

The cleanup process is expected to take several months following DTSC's approval of the project. Removal of the concrete culverts will take place first. Following that activity, excavation of RDX-contaminated soil at the former Redwater Pond and other locations will occur. Following the excavation of the RDX-contaminated soil, both the excavation of CS (tear gas) containing material, including excavation of the Landfill, and screening of soil in Area 1C to remove UXO and/or ordnance fragments will occur simultaneously. Detonation of UXO, if needed, will occur following the completion of the soil screening activity. Grading of the Landfill area and Area 1C will occur after the screening and removal of UXO/ordnance fragments from soil and excavation of the CS (tear gas) containing material. Weather conditions may result in the completion of the work taking longer than anticipated. The community will be notified in advance via an advertisement in the Chino Hills Champion of the days during which trucks will be transporting contaminated soil and the days on which detonations will take place.

Questions and Comments Submitted by Wayne S. Hokom May 24, 1999

J. Hokom Company and I own approximately 165 acres in the Chino Hills. These parcels are identified as parcel #s 1033-021-03 and 1033-021-05.

The management of J. Hokom Co. And I as a individual owner, believe it is in the best interest of all concerned that Aerojet complete the site cleanup as soon as possible.

Please record this letter as a response to your call for public comment.

DTSC concurs with this comment.

Questions and Comments Submitted by Raymond and Heidi Kerr, June 27, 1999

It is with extreme concern that we submit our comments regarding the proposed Aerojet clean-up project.

First and foremost we very strongly request that a full Environmental Impact Report be implemented. Let us state that we feel it is inconceivable that the DTSC would have entered into a consent decree with Aerojet in 1995, before any information concerning this site had even been uncovered. Numerous citizens of Chino Hills have expressed concerns regarding the effects that various chemicals and the clean-up of such contaminants might have upon the environment in which we live. As members of the community we should have the main voice of opinion in this clean-up project since it affects us and our families and neighbors. An Environmental Impact Report will help make sure that all potential hazards are identified. Residents of Chino Hills welfare and safety firmly rest upon the implementation of a FULL Environmental Report.

DTSC agrees that the community must have the opportunity to participate in decisions for the two projects for which we are the lead agency. This has been the case. The Closure Plan was public noticed in 1993 and the Remedy Selection in 1999.

DTSC understands your concerns with respect to the potential environmental and health effects of the clean-up at Aerojet. The purpose of the Consent Agreement entered into by DTSC and Aerojet is specifically to provide a legally binding mechanism for regulatory oversight of the Corrective Action (clean-up) process. This agreement does not limit or reduce DTSC's mandate to ensure the protection of human health and the environment. In contrast, the agreement requires Aerojet to conduct every aspect of the site investigation and cleanup under the review and approval of DTSC.

As stated earlier, DTSC takes the health concerns of the community very seriously. The Corrective Action process, as outlined in the response to General Comment 1, requires Aerojet to fully evaluate the nature and extent of contamination at all locations which potentially have been contaminated due to past operations. Through the course of the site investigation, numerous workplans and reports were generated to detail the investigation and to identify the additional steps necessary to clean up the contamination. Through careful evaluation of all workplans and reports, as well as independent laboratory analysis of split samples to verify the results of the field work, DTSC has concluded that ten impacted areas have UXO and/or hazardous chemicals at concentrations above the clean closure requirements. Although these specific areas will require cleanup, the RFI Report, the RFI Addendum Report, the Health Risk Assessment and the Initial Study indicate that there is not a significant negative impact to the community from present day conditions at the site. However, anyone trespassing through on the site may encounter contaminated soil or unexploded ordnance. It is for the purpose of removing this contamination that the Corrective Measures were proposed. In addition, as a result of community concerns, DTSC has added a number of Conditions of Approval for the Corrective Measures, and is requiring Aerojet to perform additional work. Please see Section II and Attachment B for further information.

For further information on CEQA and the preparation of an Environmental Impact Report for this project, please see the response to General Comment 3.

Also, we request that the U.S. Government be contacted to declassify the make up of all chemicals manufactured and tested at the site. How can the site be fully cleaned up if you don't even know all the toxic substances that you are working with?

Based on the information DTSC has to date, the classified chemicals were chemically related to the organophosphorous "nerve gases" and mustard gas, and were used only in small quantities. We also know that the classified agents could be neutralized in the same manner as known chemical agents at the facility, i.e. with caustic, or strongly alkaline solutions. In addition, known organophosphorous nerve agents degrade in the environment in a matter of days. Mustard gas persists longer in the environment than the organophosphorous agents, although it too eventually degrades. The soil in the Caustic Ponds and in the area of building 003 (AOC #11, Chemical Test Area) was tested for chemical agents ("nerve gas" and mustard gas), CS (tear gas) and organophosphorous pesticides. Results of the testing indicated that these chemicals were not present in the area. However, in response to public concerns, DTSC is continuing to evaluate whether or not any additional chemicals need to be tested for. If we obtain additional information indicating that additional chemicals could be present in the area, we will require Aerojet to perform additional testing. DTSC has sought additional information from the military; specifically, the Army Soldier and Biological Weapon Command at Aberdeen Proving Ground in Maryland. This organization maintains records on various chemical agent programs and projects. To date, this organization has not been able to provide us with any additional information.

Secondly, we request that your department work hand in hand with the Agency for Toxic Substance and Disease Registry, the Division of Health Assessment and Consultation. Step out of your comfort zone. Request on the behalf of the citizens that a formal Health Study be performed. At various meetings: DTSC's and cities, numerous residents showed concern as to the impact of the current possible contamination that may have taken place upon the people of our city. People have voiced extreme concern that their family members, friends, and

Neighbors have experienced cancer, miscarriages, thyroid problems and other health problems. Put our community's minds to rest. Perform a full Health Study so we would truly know the health effects Aerojet may have had on the people of this city. Require Aerojet to fund this project if funding is an issue!

The Human Health and Ecological Risk Assessments for the Aerojet Chino Hills Facility were conducted following DTSC and USEPA guidance documents and risk assessment protocols. The risk assessments were performed and reported in the RCRA Facility Investigation (RFI) Report, Section 7 and Appendix G, and the RFI Addendum Report. The risks to human receptors were calculated based on the extensive environmental data collected at each of the SWMUs and AOCs. Potential risks were estimated for potentially exposed on-site individuals and off-site individuals and ecological receptors. Potential off-site risks were below levels of regulatory concern. Risk-based clean up goals for chemical contamination other than uranium were calculated for the Facility were based on future residential exposure conditions. As mentioned in the Response to General Comment 4, DTSC is currently evaluating existing levels of uranium on the site to determine if these levels are adequately protective of human health and the environment for future residential exposure conditions. DTSC is also evaluating the UXO cleanup in light of the future residential scenario. Land at the facility will not be released for unrestricted, residential use unless the potential risks on the facility for all contaminants of concern are at or below those for unrestricted, residential use.

The Agency for Toxic Substances and Disease Registry published a Health Assessment Guidance Manual for conducting health assessments for a facility or release. The health assessment is an evaluation of relevant environmental data, health outcome, and community concerns associated with the site where hazardous substances have been released. The health assessment identifies populations living or working on or near hazardous waste sites for more extensive public health actions or studies are indicated. The ATSDR health assessment is similar to the risk assessment conducted under the USEPA/DTSC protocols with the exception that the USEPA/DTSC protocols actually calculate potential risk to potentially exposed individuals while the ATSDR Health Assessment qualitatively compares potential dose with health guidelines for individual chemicals.

The human health risk assessment (HHRA) for the Aerojet facility evaluated present site conditions and established cleanup levels for the chemicals of concern. The HHRA did not evaluate health effects to the community that may have resulted from past facility operations. Such studies are outside the expertise and legal jurisdiction of DTSC; rather, studies of this nature are conducted by the Department of Health Services, Environmental Health Investigations Branch. In response to community concerns, Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center has conducted a cancer study in the Chino Hills area. The study concluded that there were no increased cancer rates for either childhood or adult cancer. Please see the response to General Comment 2 for further information.

The RFI, RFI Addendum, the human health risk assessments in these reports, the epidemiological report by the Desert Sierra Cancer Surveillance Program and the information contained in the response to General Comment 6 provide information on the hazardous materials identified at the facility, the potential risk to humans on the facility, and occurrence of both childhood and adult cancers in the Chino Hills area. The only information not provided by these reports that would be included in an ATSDR Health Assessment is information on community profiles, potential exposure to constituents in the drinking water from municipal sources, a discussion of community health concerns, and potential occupational exposures. An ATSDR Health Consult would not provide much more information concerning the potential health affects of the facility on the adjacent community than is already available.

Now, pertaining to the Community Meeting which was held by the City of Chino Hills on Monday, June 7, 1999. We were greatly alarmed when it was stated that our water has never been tested for radioactivity or Depleted Uranium. Depleted Uranium is one of the major contaminates on the Aerojet site. Yet, how could such an important test be ever be overlooked?

DTSC understands your concern regarding the safety of drinking water in Chino Hills. Drinking water for the City of Chino Hills is not obtained from sources that could be impacted by surface water or localized groundwater from the Aerojet facility. Therefore, there is no need to test present sources of drinking water in Chino Hills for radioactivity due to uranium based on potential contamination from Aerojet. You may wish to contact the City of Chino Hills for further information regarding drinking water. Please see the response to General Comment 7 for further information on the hydrogeologic conditions underlying the site.

As mentioned in the response to General Comment 4, DTSC will require Aerojet to conduct an evaluation of uranium levels in surface water and groundwater.

Regarding the DTSC meeting held May 14, 1999, at Townsend Middle School. We are greatly surprised to hear of various creek sites in the hills which were found to be chemically contaminated. We would like to further request that the water and soil in our residential area which lies in a ravine between Green Valley Drive and Morningside be tested for contaminants. We would like to further request that we receive notification and results of all test and/or findings.

Please see the response to General Comment 7 for information on the testing of surface water at the Facility.

Sediments in two drainages off site to the north of the facility have also been tested, and the test results revealed that no contamination was present. These results are reported in Section 6 of the RFI Addendum Report and are included as Attachment G to this Response to Comments. The drainage area between Green Valley Drive and Morningside does not originate from nor is it connected to drainage from the Aerojet site. Therefore, DTSC does not believe sampling at this location is warranted.

Furthermore, we would like to strongly suggest that all scheduled clean-up days be posted in the Champion newspaper. Specifying especially days in which incineration or transportation of contaminants will occur. Also, we would like to express that we are completely against incineration. Nothing could protect us from any contamination that is sent into the air in which we breath. Particles find ample ways to travel airborne upon the waves of the wind! Please see enclosed articles!

The public will be notified in advance via an advertisement in the local newspaper (Chino Hills Champion or Daily Bulletin) of the time frame during which truck transport of soil containing explosive chemicals will occur. The truck route was published in the Initial Study. The public will also be notified in advance of the time frame which detonation will occur.

Incineration of contaminants on the Facility is not one of the corrective measures. Contaminants will be transported to offsite facilities certified to accept these types of wastes. However, if warranted, some materials may be destroyed at certified, offsite incinerators. There will be no incineration of any chemicals/wastes at the Aerojet site during cleanup efforts.

We would further request to receive further notification of any additional chemicals or contaminants that may be identified during the supposed Aerojet clean-up. We also request new information regarding these contaminants be made public via the Champion newspaper.

We look forward to your comments and answers to our questions and concerns.

Results of all sampling conducted during the implementation of the Corrective Measures will be documented in the Corrective Measures Completion Report, which will be submitted to DTSC by Aerojet following completion of the

Corrective Measures. The public will have an opportunity to review the report and provide input to DTSC prior to termination of Corrective Action at Aerojet. In addition, the public is free to call Ms. Christine Brown, DTSC project manager, for additional information regarding the Corrective Measures.

Questions and Comments Submitted by Marjorie Musser Mikels, May 28, 1999

On behalf of myself and other affected citizens and residents of San Bernardino County, California, I hereby submit public comment in response to the above referenced "RFI."

I hereby demand that a full Environmental Impact Report under CEQA be prepared to address the numerous issues raised herein, and by members of the affected community, particularly those most severely impacted, i.e., the neighbors in close proximity to the project, residing in Chino Hills. A Mitigated Negative Declaration is insufficient to address the dire environmental and health effects which have been experienced, are being experienced and will be experienced as a consequence of the existence of this facility and the proposed "clean-up plan."

In reference to your request for an EIR, please see the response to General Comment 3.

Based on the results of the site investigation and Health Risk Assessment as documented in the RFI Report and RFI Addendum Report, DTSC believes that present site conditions are not impacting the community of Chino Hills. As discussed in Section II, administrative and engineering controls are being required as part of the Corrective Measures, and DTSC believes these controls are sufficient prevent significant adverse impacts to human health.

The possible health effects to the community from past Aerojet operations have not been evaluated by DTSC because they are outside our jurisdiction and expertise. Please see the response to General Comment 2 for further information.

I further respectfully appeal to your department, to Aerojet, and to those officials in whose jurisdiction this project is situated to provide to the residents of this community a full scale Health Risk Assessment as per the guidelines of the "Public Health Assessment Guidance Manual" available through the Agency for Toxic Substance Disease Registry, Center for Disease Control in Atlanta, that an Epidemiological Study be conducted of all the residents in the neighboring community with depositions of the neighboring citizens. I request census tract data be collected showing all wells, with the disposition of all affected population surrounding those wells. Please identify all small water systems, specifying from where all water used by the community is pulled and the depth of each well and do a reverse modeling of the plumes from the Aerojet site, identifying where the plumes were located at specific times over the life of the Aerojet facility.

Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments for an explanation of the DTSC and ATSDR risk assessment processes.

Geologic conditions make it highly unlikely that the contamination found in shallow groundwater will migrate to deeper groundwater or away from the site. DTSC evaluated the sampling data from both on site and off site local wells and found no evidence that chemicals in groundwater beneath the site have migrated beyond the immediate and localized area of impact. The City of Chino Hills drinking water wells are located upgradient and several miles northeast of the site. Localized groundwater contamination at the Aerojet facility does not have the potential to impact these wells. Please see the response to General Comment No. 7 and the memo by Paul Carpenter, DTSC geologist, for further information. This memo is included as Attachment D of this Response to Comments.

I ask that liability funds be established by Aerojet for use by the community in obtaining diagnostic testing, with full body counts as needed to determine radiologic contamination and that funds be made available for medical treatment of affected adults and children living down wind, downstream and in close proximity to the explosions of depleted uranium and other contaminants introduced into the community by Aerojet. Finally, please provide guidelines as to how the community may seek and obtain a Technical Assistance Grant, to assist the residents in obtaining independent testing of their yards, water supply and their air resources, since a great deal of doubt has been engendered in the community as to the intent of the property owner to protect the interests of the community, such as reasonable doubt arising in part by the procedural path this project has thus far taken.

See response to General Comment Nos. 2, 4, 5, and 6.

Demand for environmental impact report:

It is inconceivable that DTSC could have entered a "consent decree" with Aerojet in 1995, before any of the information concerning this site had ever been uncovered, and with absolute no notice to the community. It is unfathomable that no meetings were ever held with the residents to discuss this RFI until 1997, and then only when citizens, expending vast amounts of their own time and monetary resources, implored the agency to meet with them and finally prevailed on DTSC to visit them in the garage of a resident. It is appalling that answers to questions submitted by those concerned citizens in 1997, were never provided to the questions submitted by those concerned citizens in 1997, were never provided to the questioners until April, 1999, and that no public meeting was called until May, 1999, to explain the project to the citizens and seek resident input. This is especially incredible given that there are residences within a half a mile of the project and four schools within a two-mile radius.

DTSC and Aerojet entered into a Consent Agreement to determine if there is or has been a release(s) or threatened release(s) of hazardous waste or constituents into the environment. The Consent Agreement is a legally binding document that describes the responsibilities of both Aerojet and DTSC to evaluate and, if necessary, remediate contaminants found on the Facility. The Consent Agreement also has provisions for public outreach and for compliance with the California Environmental Quality Act (CEQA). The Facility investigation was conducted in accordance with provisions described in the Consent Agreement and following the applicable regulations. The investigation and Corrective Action could not have proceeded with DTSC providing regulatory oversight without the Consent Agreement in place. As mentioned in the response to General Comment 1, DTSC involves the public at various times during the project, and encourages anyone with additional questions to contact us for further information.

It is outrageous that the Environmental "Protection" Agency for our state would even contemplate allowing Aerojet to "clean up" this site by further incineration, explosions, land-fill and midnight hauling of contaminated materials through this community, without an Environmental Impact Report under the California Environmental Quality Act. A "mitigated negative declaration" is inadequate, especially with new information being released about the cancer-causing effects of exposure to depleted uranium, especially explosions thereof, and the current studies being conducted on the health impacts of perchlorate, neither of which study is expected to be concluded until the year 2000.

The remedial actions for the Corrective Measures do not include onsite incineration, landfilling or hauling chemically contaminated soil at night. As stated in the response to General Comment 3, the potential negative environmental effects of the Corrective Measures were evaluated in the Initial Study. Based on the scope of the Corrective Measures activities and the procedures for implementing these activities, the Initial Study concluded that the project would not result in significant impacts that would adversely affect the environment or health standards. Therefore, a Negative Declaration was prepared and no Environmental Impact Report (EIR) is required.

As part of the remedial measure for ordnance removal, segregation, and handling, unexploded ordnance (UXO) will be detonated onsite in accordance with military Explosive Ordnance Disposal (EOD) procedures that provide for safe handling of the ordnance. The UXO items being detonated at the site are, by nature, unsafe and unstable and thus illegal and unacceptable for transportation through local residences or along public streets. This activity was evaluated in the Initial Study. Based upon that analysis, the detonation that will take place as part of the Corrective Measures will not have a significant adverse impact to persons remaining off site.

While one can appreciate the urgency with which Aerojet wishes to return this site to "economic use" by residential development, distributing to the new property owners thereof the future contamination problems which may, as in the case of exposure to ionizing radiation, not come "home to roost" until two to twenty-five or more years after the exposure and the particles, lodges in the human organism begin to divide and replicate, any decision made without a full- scale EIR and without the conclusions of the studies being undertaken right now would be premature.

Further, the April 14, 1999, decision of the Fourth District Court of Appeal in the San Bernardino Valley Audubon Society v. Metropolitan Water District of Southern California, et al, case, 1999 Daily Journal D.A.R. 3545, holds that "the agency must prepare an EIR whenever substantial evidence in the record supports a fair argument that a proposed project may have a significant effect on the environment. If such evidence is found, it cannot be overcome by substantial evidence to the contrary. The lead agency....does not resolve conflicts in the evidence, but determines only whether substantial evidence exists in the record to support the prescribed fair argument."

A mitigated negative declaration may be used only when the initial study identifies potentially significant effects on the environment but revisions in the project plans "would avoid the effects or mitigate the effect to a point where clearly no significant effect on the environment would occur and there is no substantial evidence that the project as revised may have a significant effect on the environment" (at P. 3546).

In the project before this lead agency, DTSC, the clean up plan, and "mitigation" measures are the same environmentally devastating activities that are known to cause contamination of the environment, i.e., explosions, burning, using water to wash down contaminants, excavation, and hauling contaminated materials through the community, within ten feet of residences.

Currently, there is no information or evidence to suggest that the remedial activities will have a significant adverse effect of the environment as determined in the Government Code Section 15064. The three remedial measures include excavation and transport offsite of chemically contaminated soil and CS (tear gas) containing materials, and onsite screening of soil to remove UXO and detonation of unstable UXO. No 'burning' is included in the remedial activities. As evaluated in the Initial Study, implementation of these measures will not result in a significant negative impact to the environment. Please see the response to General Comment 3 for further information.

The record, reviewed briefly below, contains substantial evidence raising a fair argument that this proposed project may have a significant effect on the environment. That is all this community need show.

This is vitally important to the residents of Chino Hills. Throughout this review process, all the residents of the entire city have been required to share one copy of a seven-volume document located at the public library, unable to take it home for review at their leisure, or to mark important passages. Most recent revelations about the perchlorate and other important facts released only in 1999, have not been located in the library for review notwithstanding McLaren Hart's assertions that they deposited the documents there. The members of this community have never been given the opportunity to have their own draft EIR to hold in their possession, to share with neighbors, discuss with friend, then to submit their comments for publication with answers provided in written form to all who participate or request the document.

The record shows ample evidence to support this community's right to that process.

In response to community concerns, a second copy of the document mentioned above was placed in the Chino Hills library and was available for check out. Additional copies of the documents are available at the DTSC Cypress office. DTSC conducted the public notice and public comment period in accordance with the regulations and DTSC policy. The community is encouraged to contact DTSC for site-specific information.

The record shows alarming health problems in the community:

At the one publicized hearing held in the community, alarming reports of health defect experienced by residents were reported. I will use first names only of some of the speakers, as reflected by my notes of the meeting at which I was in attendance. This summary is by no means exhaustive.

Leanne reported her daughter is sick all the time and that she had numerous pregnancy problems.

Pat reported she had a still born child, miscarriages and children that have learning disabilities, chronic asthma, and respiratory diseases.

Nancy has lost two cats to thyroid problems and her dog has been diagnosed with thyroid problems.

Deborah reported that she lives closest to the site and the woman across the street died of cancer, then Deborah's next door neighbor died of cancer, then the woman who lived next door to the woman across the street died of cancer. She herself has suffered a miscarriage.

Heide, a long time resident, reported childhood cancers, thyroid problems, and leukemia.

Susan recently had "cold nodule thyroid surgery"; she has lived here since 1975, and has no trace of thyroid problems in her family's prior health history.

A lady reported her 13 year-old son began having seizures, has no energy--no understanding as to the cause.

Candace, a resident since 1985, was diagnosed with Hodgkin's Disease and lymphatic cancers.

Mary reported problems with pregnancies.

Pam reported that she lived here a long time, and when she was small, she along with four other girls in close proximity to Aerojet, during a short period in the 1980's all were diagnosed with leukemia; one girl died. Her family received notices that the water in Chino Hills was polluted and they could not drink the water, she remembers the area being designated a Superfund site.

Kelly reported her friend's daughter in the area recently died of cancer and she had repeated pregnancy problems.

Many people demanded to know why there was no baseline data on the health status of the community, how long these health hazards will persist, what are the long-range effects of the perchlorate, depleted uranium, and so called "classified" family of chemicals (including possibly agent orange, napalm) as well as admitted gases such as serin gas, mustard gas, nerve gas going into affect this community. They wanted to know who will pay the cost of medical diagnosis, treatment and deaths of the residents. They wanted to know the half-lives of the materials used, detonated, tested and disposed of on the site. They wanted to know the concentration levels. The repeated message was: People are dying; people are sick! Who is responsible? How do we get help?

DTSC recognizes and understands that residents have experienced problems with their health. Although our agency empathizes with the community's health concerns, we do not have the authority or expertise to conduct epidemiological studies. The expertise and legal authority lie with the Department of Health Services, Environmental Health Investigations Branch. As mentioned in the response to General Comment No. 2, there is no evidence that current site conditions at Aerojet or the Corrective Measures will adversely impact the off site community of Chino Hills. Once the Corrective Measures have been implemented, and the community education program begun, the land will be suitable for residential use.

For health effects of specific chemicals, please see response to General Comment 6.

There is no evidence that napalm or Agent Orange were ever tested or present on the Aerojet Chino Hills Facility. These chemicals are not related to the chemical agents that were tested at the facility. Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments for information on the classified chemicals.

The record shows alarming observations of inexplicable, unreasonably dangerous conduct on the part of the project proponent to which unacceptable answers have been provided.

Ken reported seeing Rainbow Jets on Carbon Canyon Road. He observed explosions on a daily basis, heard great blasts, saw clouds of smoke emerge from tunnels in the hillside, saw explosions one hundred feet high. He demanded to know if and when the ground water would be tested. He wanted answers about the tunnels' depth and how deep they were excavating to recover spent or unexploded munitions.

Fred and Nancy each separately reported observations of the hand grenade found in Nancy's back yard, in response to which the bomb squad had to be called; Fred also reported great problems with the creek coming out of the site, near which in someone's back yard there was found m-1 ammunition still in clips, which he believed was ordnance from 1947 or so.

Raymond observed that the run-off from the site goes in lots of directions and he noted that testing was not being done off site, outside the perimeters of the Aerojet property.

Judy noted the creek empties into Soquel Lake yet the project proponents have failed to test the lake.

Steven reported that Old Hot Springs Aquifer is under the site of Aerojet. Water at one collection point may pop out miles away, because when the water goes underground, it gets very hot, making it boil up somewhere else.

Pat was disturbed that not one city council member or water official appeared at the DTSC meeting to hear the residents' concerns or help answer questions.

Carol noted the access issues, i.e., Soquel Canyon road is proposed to go under, over or around Aerojet, yet none of that has been addressed.

Judy raised the experience at the San Diego park, a former test range, where the two small boys were killed when a missile they dug up exploded. She noted that at that smaller site than the 700-acre Aerojet site, they had combed the area for ordnance for 12 years, but here, at Aerojet, they are only testing a few small areas on the site, to shallow depths. Aerojet expects to be done and out of there in a few months. Even though Aerojet is allegedly missing all their records from the period of 1954 to 1991, they have identified these few areas to test and remediate by aerial and ground photographs, and "interviews with former employees." But when inquiries were made, they admitted only five employees could be located (after running an operation for over 40 years) and one of those is now apparently "missing." They refused to identify those people, whom they relied on to tell them where, on seven hundred acres over a period of 40 years there might be areas to test.

Karen testified that she heard explosions only last year; when she called, she was told the information was "classified" and that the identity of the chemicals being exploded in her community could not be revealed. She and many others wanted to know the impact of having ordnance buried and exploded deep in the hillsides on land stability (landslides) in the area, and demanded to know the community's later exposure.

Dolly, a resident since 1963, witnessed huge explosions which broke out the windows in her family's home, and made the sky all orange. (Fallout?)

For information regarding explosions that took place at the facility and regarding "tunnels", please see the response to comments made by Mr. Ken Baxter on page 105 of this Response to Comments.

For information regarding the hand grenade and M-1 rounds found in a back yard, please see the response to comments made by Mr. Fred Sharp on page 111 of this Response to Comments.

For information regarding testing of surface water both on the site and off site, please see the response to General Comment 7

Testing of soil at two off site locations north of the facility, known as the east gully and west gully, did not reveal the presence of chemical agents, explosive chemicals, perchlorate, and semivolatile organic compounds. In addition, the geology of the site make it highly unlikely that significant quantities of groundwater would move away from the site. Lake Los Serranos lies approximately 1.5 miles northeast of the site. Therefore, there is no need to test Lake Los Serranos for the contaminants found in groundwater at Aerojet. Please see the response to General Comment 7 and the memo prepared by Paul Carpenter, DTSC project geologist, included as Attachment D to this Response to Comments.

For information on the presence of hot springs at or around the facility, please see the response to comments made by Mr. Steven Hood on page 113-114 of this Response to Comments,

The City Council has expressed significant interest in the project and held a public meeting on June 7, 1999.

For information on the access issue, please see the response to comments made by Ms. Carol Dobrikin on page 19 of this Response to Comments.

For information on the accident at the Tierra Santa community in San Diego and the site investigation process, including the employee interviewing process and ordnance sweeps, please see the response to comments made at the public hearing by Ms. Judy Morton on page 138, the response to comments made by Ms. Judy Morton (comment nos. 23, 24, 27, 44, 49) on page nos. 54-56, 58 and 59, and the response to comments made by Todd and Karen Miller on page nos. 47-48

The concern that Ms. Judy Morton had regarding "missing records" regarded files at DTSC that were reported to be missing. These files have now been located.

For information on recent explosions, nature of explosive chemicals in the ordnance being detonated and landslides, please see the response to comments provided by Mr. Ken Baxter at the public hearing on page 105, the response to Comments made by Ms. Marianne Napoles on pages 163-164, and the response to comments provided by Ms. Judy Morton (question #50) on page 59 of this Response to Comments

For information on the large explosion that took place during the late 1970's, please see the response to comments made by Ms. Judy Morton (question #63) on page 62 of this Response to Comments.

Procedural inadequacies

Many community residents complained about the process by which this "project" has been unfolding. There have been no tests undertaken of the groundwater, or the dust soils in the community surrounding the site. No good maps have ever been shown. The site is locked and secured from sight and entrance by the public. No graphics have ever been produced with pictures or other means of understanding what is being done. Citizens were not warned about planned burns, which are continuing even before the plan is approved. The creek water was not tested. No cancer clusters studies have been conducted. Only in one area of the site will they install any water monitoring wells, at A-12, which is not installed yet, and nothing is said about what steps will be taken to protect the community assuming the well show water to be contaminated. The identity of "classified Materials" used, exploded, tested, and introduced into the environment has not been made public, even though these residents are the victims of any impacts they might have on the community.

For information regarding the groundwater contamination at the facility, please see the response to General Comment 7.

The RFI Report and RFI Addendum Report contain the facility plot plan, numerous plot plans documenting sampling locations and topographic maps which show a 1-mile and 2-mile radius surrounding the facility. The RFI Report contains photographs of each SWMU and AOC and several additional figures including an aerial view of the facility were presented at the public meeting held in the Chino Hills City Council chambers on June 7, 1999.

As mentioned in the response to your comments on pages 25 and 41, there is no evidence to suggest that contaminants have migrated off site. Therefore, there is no need to test soil in the community surrounding the site.

In response to community concerns, DTSC has informed the community ahead of time (telephone calls to the City of Chino Hills and concerned community members) for detonations taking place at the facility. DTSC will continue to inform the community regarding detonations once cleanup operations begin. As part of the Corrective Measures, Aerojet will also provide the community with advance notice (via an advertisement in the Chino Hills Champion and/or the Daily Bulletin) regarding the time frame for truck traffic containing chemically contaminated soil.

With the exception of a fire-fighting training exercise conducted in late 1997, no burning has been conducted at the facility since 1992, when Aerojet notified DTSC that it was closing the OB/OD area and burn pits. This exercise was conducted by the Chino Valley Fire Department and involved building 008. This building is not a SWMU or AOC, and since no hazardous waste or hazardous materials were involved, the matter was outside of DTSC's jurisdiction. Please see the RFI Addendum Report, page 6-3 for further information.

Surface water has been tested for explosive chemicals and perchlorate at a number of locations on the facility. In addition, two off site drainages north of the facility have been tested for explosive chemicals and perchlorate. The sampling results revealed no chemical above levels considered safe for human health or wildlife. Please see the response to General Comment 7 for further information.

Water monitoring wells have been installed at the Former Redwater Pond, and testing to date has shown that the contamination found here has not migrated. Additional testing of the contaminated groundwater at the Upper A-12 Test Area will be conducted to verify that this groundwater is not migrating. In response to public concern, the pumpability of subsurface water at both the location of the former Redwater Pond and at the Upper A-12 test area will be evaluated to determine whether or not the water can be pumped. Please see Section II for further explanation. The localized contaminated groundwater does not have the potential to impact current drinking water wells operated by the City of Chino Hills because these wells are located upgradient from Aerojet.

Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments for information regarding the testing of classified chemicals at the Facility.

As mentioned in the response to General Comment 2, a cancer study has been performed that showed no increased cancer rates in the Chino Hills community.

Aerojet is being allowed to make its' own plan, do its' own testing, with no on-site supervision by the agency who occasionally gets a split sample to do independent testing.

DTSC respectfully disagrees. DTSC has been involved and continues to be the overseeing agency for the clean up of the site. DTSC has ensured that the standard protocols and procedures for the closure and remediation of the site were and continue to be effectively implemented. Please see response to General Comment No. 1.

Meanwhile, the community is observing night time truck haulers with flapping unsecured covers, and dirt flying off the trucks bearing loads of contamination coming down their streets after midnight. They are observing explosions and burning coming from the site with no warning or alerts as to when that is to occur.

DTSC has spoken with both Aerojet and McLaren/Hart, and both have stated that they have not authorized or supervised clean-up operations at the Facility during the night. As stated in the community letter mailed in October 1999, there is regular truck traffic to and from the facility at night carrying hay and other materials for cattle grazing and carrying petroleum products relating to the oil drilling operations occurring on the facility. Information regarding these activities is included as Attachment H to this Response to Comments.

DTSC has added several requirements for trucks hauling of the contaminated soil off site during the Corrective Measures. Please see Section II for additional explanation. The community will be notified in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) of the time frame during which trucks carrying contaminated soil will be traveling from the facility.

The residents note McLaren Hart has no nuclear chemist or physicist on their staff. Their water is not being tested, nor the contaminants mitigated. McLaren Hart claims to have tested "every water source" on the site, but say nothing about the run-off, or the water in the aquifers under the site. They justify that by semantics, saying it is not really a "water table" and if there are pollutants it is probably from the Puente Hills or the cows, or as they said regarding arsenic, it's naturally occurring in those hills.

For information on the issue of depleted uranium at the site, please see the response to General Comment 4.

For information on testing of surface water and groundwater at the site, please see the response to General Comment 7.

There have been no screening tests for Radon 222 gas levels, Radium 228, Uranium 234, 235, 236, or 238, no tests for Radium 228, Strontium 90, tritium (radioactive hydrogen used for trigger devices) polonium or thorium or radioactive cesium. These could have been injected through cracks in the rock layers that widened at the time of the blasts. No screening tests for gross alpha, beta or gamma radiation are reported or planned, even though depleted uranium is an alpha emitter. If the alpha levels are greater than 5 picocuries per liter, they must identify the specific isotopes. But Aerojet ignores the obvious impacts of ionizing radiation in its discussion.

And one can see why they wish to rush through this approval as quickly as possible. The Environmental Protection Agency is only right now setting the standards for radionuclides, and their completed study is not expected until the year 2000. The National Academy of Sciences is doing a Radionuclides Study right now. And all the reports are not yet in on perchlorate contamination of water resources, and the gulf war syndrome connection to depleted uranium was only recently released. To rush approval of this plan on a "Mitigated Negative Declaration" without an EIR prior to conclusion of all these important studies of radionuclides, is premature and inept. It could also unreasonably endanger the health and safety of the community, particularly the children in the four schools in close proximity to the Aerojet site.

The jurisdiction for the cleanup of depleted uranium (at the Aerojet Chino Hills Facility) based on its radioactive properties lies with the Department of Health Services, Radiologic Health Branch. However, DTSC does have the authority to regulate uranium based on toxicity, and we have therefore included uranium as a constituent of concern as part of the site investigation. As mentioned in General Comment 4, kidney toxicity is the most sensitive health effect of depleted uranium. Please see the response to General Comment 4 for further information.

Significant quantities of radon or radium are not present at the site because the site contains depleted uranium, not uranium ore. Depleted uranium does decay to radium; however, it will take approximately one million years for the depleted uranium to decay such that significant quantities of radium, and therefore radon, are present. Strontium-90, tritium, and radioactive isotopes of cesium arise from activities relating to nuclear weapons development and/or nuclear reactors; no activities of this type occurred at the Aerojet facility. Thorium occurs as a natural decay

product of uranium; elevated levels of this element would occur as a result of uranium processing activities (i.e. isotope enrichment); no activities involving processing of uranium (the DU penetrators were not manufactured at the facility) occurred at the Aerojet facility. Radioactive isotopes of polonium occur as decay products of radon; and are considered to cause some of the adverse health effects associated with radon. As mentioned above, radon is not a constituent of concern at the facility.

The study published by the National Research Council (members of the National Academy of Sciences contributed to the study) was completed in 1999 and is available on the National Academy Press web site at www.nap.edu. This study compares guidelines and standards set by US EPA for exposure of the public to radiation from radionuclides with guidelines set by other regulatory agencies, e.g. the Nuclear Regulatory Commission. Since DTSC is not basing its evaluation of uranium on health effects due to radiation, and since the limiting health effect from exposure to uranium is kidney toxicity, this study is not applicable to the Corrective Action project.

Additionally, the California Office of Environmental Health Hazard Assessment (OEHHA) has proposed a drinking water standard for uranium called a Public Health Goal (PRG). This standard is guidance, not a Maximum Contaminant Level (MCL) which is a regulatory standard set by the Department of Health Services. The technical support document for the uranium PRG is available at the OEHHA web site at www.oehha.ca.gov. More information about PRGs and MCLs is available at the DHS web site at www.dhs.ca.gov.

Before describing in depth my particular concerns with this project---i.e., introduction of cancer-causing depleted uranium into our respiratory and digestive systems by means of explosion and incineration and contamination of our ground water with perchlorate I would like to summarize the reports of observations of citizens on a wide range of environmental impacts.

Other environmental concerns expressed by residents:

The citizens reported seeing blue line streams on the property which have not been tested or adequately addressed.

There is at least one landslide (at SWMU # 8).

Aerojet admits to 364 tons of soils containing perchlorate (a solvent, chelating agent which speeds migration of radionuclides through the soil.)

Chino Hills wells have been shut down, capped and closed because of contamination. Water washing down the contaminated trucks (supposedly part of the "clean-up" goes into the ground further contaminating the water. Chino Hills was forced to import water from Upland (11 million gallons per month in 1997) at a cost of \$400,000 because of arsenic in the wells. The caustic unlined pond containing 270,000 gallons of pollutants at the site was "upgraded" by allowing Aerojet to just increase the capacity (build up the side walls?) to contain 350,000 gallons. And Aerojet wants the public to believe the contaminated water did not leach down in to the groundwater or that the water was not contaminated because they added caustic chemicals to it?

As mentioned in the response to General Comment 7, surface water at a number of locations on the facility was tested for explosive chemicals and perchlorate, and the levels found were below levels considered safe for human health or wildlife.

As reported by former Aerojet employees, the landslide was caused by natural conditions and that the hillside upon which the landslide occurred was not used for Aerojet operations. Please see the response to comments made by Marianne Napoles on page 163-4 of this Response to Comments for further information.

According to Mike Maestas, Manager, Water and Sewer for the City of Chino Hills, perchlorate has never been found in the wells that the City of Chino Hills uses for public drinking water.

Numerous soil samples at the facility have been tested for arsenic, and the results fall within background arsenic levels. Therefore, Aerojet operations have not caused arsenic contamination at the facility.

The Caustic Ponds were closed in the early 1980's with the regulatory oversight of the Santa Ana Regional Water Quality Control Board (RWQCB). Documentation of this closure is included as Appendix D of the RFI Report. During the Corrective Action site investigation, Aerojet sampled soil at these ponds for pH, PCBs, volatile organic compounds, semivolatile organic compounds, explosive chemicals and nerve agents. The sampling results showed no evidence of contamination, indicating that the cleanup process overseen by the Santa Ana RWQCB was adequate. The caustic neutralized (degraded) the chemical agents tested in the chamber in building 003; thus, there is no possibility that groundwater beneath the ponds is contaminated with chemical agents.

Aerojet plans months of excavation of hillsides and soils to remove ordnance, to incinerate, explode, and open-air burn contaminants, in a wind corridor, in a high fire risk area, with no plan (except to add water and misting) to prevent air-borne particulates.

Implementation of the remedial measures includes provisions to prevent the spread of potentially impacted materials to the public. These provisions include using water to minimize dust generation during excavation activities, and air monitoring and shut down of activities if dust levels exceed 10 mg/m³. To minimize risk of fire from detonations, Aerojet will conduct detonations in accordance with accepted Explosive Ordnance Disposal (EOD) practices and requirements established by the Chino Valley Fire District to ensure that detonations are not performed when the combination of heat and wind or other factors would lead to increased fire risk. Please see Section II of this Response to Comments for further information.

Midnight transport of contaminated soils and materials, without Highway Patrol supervision (admitting only county and city law enforcement involved), in trucks with tarps loose, and flapping, containing loose dirt falling out, being driven right down Woodview to Peyton Drive, near residences, give little insurance of safety.

Please see the response to your earlier comment on page 32

Contaminated dust carried by winds and water to surrounding communities landing on the plants and animals and school grounds, inhaled and ingested by human and farm animals.

Please see the response to the comment made by Andre Hernandez on page 21 and the response to your comment regarding migration of contaminants off site on page 41 of this Response to Comments.

Three-legged frogs and deformed creatures found in the creek that comes off the site and through the residential community. Reports of noticeable decrease in birds and wildlife in and near the site.

DTSC evaluated the information provided in the ecological risk analysis for RDX and perchlorate and found no evidence that suggests that these chemicals at the levels present in surface water at the facility adversely affect wildlife.

Two major earthquake faults near the site could shift the underlying aquifer. Testimony was provided that in the 1930 Long Beach quake, settlement in the Hot Springs under the sight became active.

These faults do not run directly under the facility; thus, there are no hot springs at the facility. Evidence cited in the RFI Report stated that since the underlying geological formation is not permeable nor does it contain significant amounts of groundwater, the effects of the Chino Fault on the migration of groundwater into the watershed is not significant. Groundwater sampling results at the site indicate that the localized groundwater contamination has not

migrated to deeper groundwater. Please see the response to General Comment 7 and the memo prepared by Paul Carpenter, DTSC geologist for further information. This memo is included as Attachment D to this Response to Comments.

Aerojet is being permitted, under the guise of "cleaning up the site," to commit environmental crimes for which anyone else would be prosecuted, such as burning contaminants, conducting open detonations and explosions and transporting hazardous and possibly radioactive materials not properly contained or permitted by Highway Patrol.

DTSC's focus in investigating and eventual remediation of the site has been and always will be to protect public safety and welfare. The two cleanup projects under DTSC's authority that have occurred at the facility have been conducted in accordance with the legal authority granted to DTSC to implement hazardous waste laws and regulations. The Closure of the OB/OD area is being conducted under a Closure Plan that has been reviewed and approved by DTSC, and the site investigation and Corrective Measures under Corrective Action have and will be conducted under workplans and reports that have been reviewed and approved by DTSC. The cleanup of depleted uranium based on radiation is being conducted under the regulatory oversight of the Department of Health Services, Radiologic Health Branch. The activities mentioned, detonation of UXO and transport of hazardous materials, are legitimate part of the cleanup operations. DTSC regrets that we did not have better information as to the community's concerns prior to the public notice activities for the Corrective Measures.

Perchlorate

Perchlorate is a colorless, odorless solvent, used in ammonium perchlorate, a common ingredient in solid rocket fuel because it accelerates explosions. It is also used for missiles and fireworks. It was used at the site, was mixed with water by rain or otherwise, now has gotten in the community water sources and there is no economic treatment for removal from water supplies. There is no federal standard, but California standards set 18 part per billion as the level to trigger remedial action. The only remedial action available is to dilute the wells until the pollutant is at acceptable levels.

Perchlorate interferes with the thyroid glands ability to use iodine to produce hormones. In hormone-deficient condition, the metabolism, growth, and development are affected. One single crystal of perchlorate, the size of a grain of salt, can explode.

Perchlorate was the subject of scientific review at a September, 1997, Scientific American Chemical Society meeting in Las Vegas, NV. Thereafter, Senator Barbara Boxer and others amended the spending bill to add a study of perchlorate health effects and the National Institute of Health is looking into this, emphasizing the health effects on seniors, children and pregnant mothers.

The minutes of the San Gabriel Water Association on 4/20/98 show perchlorate detected in the monitoring well used at Azusa Aerojet site. Thereafter, Assemblyman Margett introduced a bill to spend \$500,000 for the University of California to conduct a perchlorate study.

Perchlorate is one of the solvents used in the manufacture of plutonium (used for nuclear bombs and reactors), and is almost always found where plutonium is, as at the Norton Air Force Base. That is because Plutonium is chemically reactive and will dissolve in concentrated hydrochloric acid, or perchloric acid. The presence of perchlorate, as well as the depleted uranium, discussed below, makes screening for gross alpha, gross beta and gamma on the site absolutely essential.

Perchlorate was manufactured by two companies since the 1950's and one of them was in Henderson, Nevada, where the facility was destroyed by a series of explosions in 1988.

It would be premature to approve any closure plan on this site until all of the studies have been concluded concerning this pollutant, especially given the number of thyroid-related illnesses testified to by members of this community.

DTSC has reviewed the scientific information presented in the RFI Addendum Report regarding the health risk and ecological assessment of perchlorate and deemed the information adequate for risk assessment purposes. At the present time, levels of perchlorate in surface water and localized groundwater do not pose a risk to the off site community or to wildlife on or off the site. Remediation of the site will further reduce the risk to both persons and wildlife. Therefore, DTSC believes the cleanup should proceed

Aerojet's lame excuses trying to blame the cows, the Puente Hills and the Colorado River water for perchlorate found in soils on their property are not well taken. With regard to cow manure, the county has for several years now been requiring dairymen to dispose of fertilizer at a place where the county allows manure to be mixed with sewer treatment plant sludge, and other industrial waste, probably including that of Aerojet. When needles were discovered in the cow fertilizer a couple of years ago, I knew how repugnant and sloppy the county was regarding this practice. In all my years growing up on a dairy farm, I never saw a cow that defecated needles. Nor does a cow urinate or secrete perchlorate.

Aerojet has suggested that nitrates, not perchlorate, may be present at the facility due to the presence of cows. As stated in the Conditions of Approval for Corrective Measures, DTSC is requiring Aerojet to sample surface water and groundwater for nitrates.

The Puente Hills are likely polluted with Aerojet's perchlorate from its Azusa plant which has severely impacted the groundwater in that whole San Gabriel Valley region, causing investment of money in two new treatment plants I know of. Aerojet also seems to be the reason the taxpayers are being called upon to expend \$100,000 million of federal money (Congressman David Drier's bill with which Gary Miller approves) and \$500,000 of the State money (Margett) to try to clean up the water on the other side of Aerojet's hillside project. Blaming the Colorado River--used to inject local groundwater wells to dilute the contaminants--is a little far fetched, since the Henderson plant blew up ten years ago. Removal of a few tons of soil is not going to do anything to stop the migration through the hills exposing residents to the soil transported through their neighborhoods, and open up to further erosion and run-off areas on the property where the perchlorate was previously used and spilled.

DTSC's focus is on the cleanup of contamination at the Aerojet Chino Hills facility. The perchlorate contamination of groundwater in the San Gabriel Valley resulting from Aerojet's Azusa operations is not related to the contamination at the Aerojet Chino Hills Facility. Based on evaluation of evidence provided in the RFI Report and additional regional groundwater descriptions, DTSC has determined the groundwater under the Aerojet Chino Hills facility is not in contact with regional groundwater resources and that the contamination in localized areas of groundwater has not migrated to deeper groundwater or off the facility. Removal of perchlorate-contaminated soil will decrease the likelihood that perchlorate will continue to migrate in surface water and to deeper groundwater. Removal of this soil in no way caused further erosion at the Aerojet facility.

Depleted uranium:

A report has been released by the Conference on Health and Environmental Consequences of Depleted Uranium used by U.S. and British forces in the 1991 Gulf War, held Dec. 2-3, 1998, which has startling findings. This report is available on the World Wide Web and reveals information from which I hereby summarize in pertinent part.

Depleted Uranium is a radioactive and chemically toxic nuclear waste product which has recently been developed for use in armor-piercing projectiles and tank armor, because it is an extremely dense heavy metal, provided free to arms manufactures. (That is because for every six pounds of uranium that enters an enrichment plant, only one pound is sent to the customer as enriched fuel for nuclear bombs or reactors; the other five pounds are discarded or used for projectiles as by Aerojet.) When depleted uranium rounds are shot on battlefields or testing ranges, the health and environmental consequences are severe.

Depleted uranium is roughly sixty percent as radioactive as naturally occurring uranium and has half-life of 4.5 billion years. D.U. contains alpha particles, the insoluble part of which is about 83.52%. The insoluble parts if they enter the body of an exposed person, will stay there, consequently ionizing body organs and tissues surrounding it, causing different types of cancer.

The soluble part of alpha particles is transmitted to the human body by absorption and through blood circulation. Sixty percent will be excreted by urine and stool within a few weeks. The residual 20% is deposited in the bones and the other 10% will be distributed to the other body organs, especially the liver, causing ionization of the tissues of the organs and disturbance of their function. This consequently may cause different types of cancer cases. (Los Alamos National Laboratories 1996).

The soluble part of the alpha particles inside the body of human beings has a chemically toxic effect on DNA of reproductive cells which causes congenital anomalies and destructive effects on reproductive mechanism resulting in primary and secondary sterility. (Dan Fahey, 1998). A U.S. Army Environmental Institute Report 1995 and Department of Veterans Affairs 1997 showed workers exposed to soluble uranium have signified rise in chromosomal aberrations and sister chromatic exchange. It is likely the alpha particles D.U. contains with cause infertility, congenital anomalies, low birth weight of babies of fathers and mothers exposed to D.U.

When a depleted uranium round impacts a target, up to 70% of the rounds burns up, causing radioactive and chemically toxic dust to be scattered in and around the target. This dust can be transported by the wind or in water and can enter the human body via inhalation, ingestion, or wound contamination.

The U.S. Army Chemical School, D.U. training 1995 says the dust or aerosol created by the explosion of D.U. weapons may be transmitted directly to the human body through respiratory system or gastrointestinal system or contaminated wounds. The indirect method of transmission is through pollution of the environment in which the soluble part of the alpha particles is deposited on the soil. "In addition, the bullets that missed their targets and fell on the ground can pollute food, surface water and ground water."

The study referenced above showed increasing registration of different types of cancer from the years 1993 and 1994 from the soldiers who fought in the Gulf War and were exposed to depleted uranium. The first couple of years the lymphomas and leukemias were reported; thereafter there began to be greater numbers of lung, bone, brain, gastrointestinal and liver cancers. What was interesting was that those persons who has actually been exposed to exploded or burning weapons, and the "dust, fumes, aerosol or ashes containing uranium oxide particles," created by the particles could be transmitted by air or carried with winds and can be airborne for miles before dropping to the ground.

The residents in Chino Hills are the closest down winders from the blasts and burns of depleted uranium and surrounding materials that Aerojet has been orchestrating for years; and the burning continues. I am informed and believe that last night (May 27, 1999) there was burning going on up at the site, leaving ashes on the cars of nearby homes.

Depleted uranium is extremely difficult to clean up after being shot into a testing range, since it oxidizes and disperses into the wind or water. Depleted uranium penetrator fragments left on the ground will corrode and

oxidize further spreading contaminated particles into soil and groundwater. Clean-up is further complicated by the presence of Unexploded Ordnance in the sand or ground where the explosion took place.

A spent depleted uranium penetrator still has radioactivity of 200 mrem/Hr... In severe fire conditions depleted uranium rounds will burn and completely oxidize, being scattered around by breeze, picked up on clothing as dust, and inhaled readily.

Contamination can be detected by urinalysis, but only in early stages after exposure. Once it is lodged inside the body a "whole body count test" is necessary to detect the depleted uranium.

The illnesses described by Chino Hills residents are those one could expect if exposed, by inhaling or ingesting dust, fume or ashes contaminated with exploding depleted uranium.

As Don Vanderkar mentioned in Section VII of this Response to Comments (page 189), depleted uranium penetrators were tested by firing the penetrator into steel sheets (representing the side of a tank) that were placed in a concrete box filled with sand. It is very unlikely that the penetrators tested in this fashion would emit significant quantities of pyrophoric uranium particles into the air since the steel sheets were enclosed in sand. Thus, depleted uranium was not used under "battlefield conditions" at the site.

DTSC has not evaluated the health effects of depleted uranium due to radioactivity (i.e. cancer). The jurisdiction for the cleanup of depleted uranium based on radioactivity lies with the Department of Health Services. However, DTSC is adding uranium as a constituent of concern to the Corrective Action based on toxicity to the kidney. Please see the response to General Comment 4 for further information.

Based on the results of the Health Risk Assessment, contaminants are not migrating off the site at levels that would impact human health or the environment.

DTSC has not evaluated the health effects from past Aerojet operations because we do not have the authority or expertise to conduct epidemiological studies. This expertise and legal authority lie with the Department of Health Services, Environmental Health Investigations Branch.

The cleanup procedures used by DHS for removing depleted uranium from the soil included screening soil to remove DU penetrators and fragments, and testing soil for radioactivity and removing soil above the DHS cleanup level established for radioactivity. At the time that Aerojet completes the field work and submits the final report to DHS, DHS then completes its own confirmatory radiologic survey of the site before approving the cleanup. For more information on the DHS cleanup process, please contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360.

In the event of a brushfire at the facility, explosive chemicals, including RDX, HMX and 1,3,5-trinitrobenzene, will "burn clean" to carbon dioxide and water and will not significantly contribute to air emissions. Perchlorate burns as well, and the end products are HCl (hydrochloric acid) and water. Uranium could bind to fugitive dust generated by the fire, but particulates containing uranium are generally heavier and would tend to settle out of the air more readily than lighter particulates such as PM₁₀. Thus, a brushfire on the Aerojet property would not be expected to generate significant quantities of hazardous emissions that would endanger the health of the community.

For information on whether or not past facility operations could have contributed to illnesses experienced by Chino Hills residents, please contact Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center at (909) 799-6181.

DTSC investigated the complaints made by citizens by asking questions of Aerojet and sending a DTSC inspector to conduct a site investigation. The site investigation did not reveal any evidence of unauthorized burning or detonation.

And we are told nothing about the so-called "classified chemicals" that Aerojet may have been using and no mention of the existence of Uranium 238, Plutonium 239, Strontium 90, materials normally associated with weapons sites.

For reply to the statement on classified chemicals, please see response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments. Plutonium 239 and Strontium 90 are not present on the site; the site was never used for nuclear weapons development or research.

Given the type of activities Aerojet was carry out on the site and the substantial evidence of record showing there may be significant environmental impacts of their project which cannot be mitigated by their "clean-up" excavations, burns, explosions, haulings, sweepings, screenings and landfilling, we respectfully implore this agency to require an EIR.

See response to General Comments Nos. 1 and 3 and the project description in Section II of this Response to Comments.

"Mitigation" measures

I hope the above demonstrates that the proposed "mitigation" measures are insufficient to halt the devastating health and environmental impacts of this project. The project proponents intend to:

*Segregate (create dust and particulate matter, which they claim they'll stop with application of water, which will only create mud which sinks down into the ground, washes away in the rain to the water supply);
Landfill (creating dangers for future generations by leaching into the soil, or leaving unexploded land mines for future children);
Incinerate (causing oxidation and particulate matter formation to be dispersed all over the valley by winds or water);
Detonate (shown to increase the risk of cancer by ashes and particles and debris).*

The application of a light water spray is a standard practice to reduce airborne dust during soil movements. The amount of water to be used will not saturate the soil to form mud or water runoff.

Segregation as used in the Corrective Measures refers to excavation of CS (tear gas) containing materials from the soil and placing the material in a sealed container for transport off site.

A landfill will not be created at the site. Certain wastes will be transported to an appropriate permitted landfill for proper disposal.

Incineration is not part of the remedy described in the Corrective Measures Workplan (CMW). Any limited detonation of unexploded ordnance will not produce ashes and particles/debris that would increase the risk of cancer.

Please refer to the Corrective Measures Workplan and to Section II of this Response to Comments for a description of the Corrective Measures.

I suspect that the true "mitigation" measures being taken by Aerojet are the political ones, and I must briefly describe what I mean.

"Cast Blame": The proponent is blaming the cows for the nitrates, even though the cows are largely located down wind and down stream and represent one of the primary environmental impacts that the RFI fails to address, the impact of Aerojet's exploding radioactive pollutants into the air, in the place where the wind enters from the wet each day and disperses contaminants all over the "inland valley," including the agricultural preserve. The proponent refuses to discuss nitrates at all, even though one of the primary wastes of the weapons business is the nitrates and salts produced. I suspect this is because there is already an agreement that the dairies will be held to blame for that, and the costs of the desalination plant, and clean up of the Chino Basin. But that issue of Aerojet's pollution by alpha-emitting radiation over the corrals of cows, which give us milk to drink, is an important question and blaming the most docile of creatures, whose urine and manure produced thousands of years never gave anyone cancer, is disingenuous.

DTSC has no reason at present to believe that nitrates present an adverse environmental impact to groundwater at the facility due to the past operations. However to address the issue of nitrates and to ensure that there is not a problem with nitrates, DTSC will require Aerojet to collect samples and test for nitrates in surface water and in groundwater. DTSC will provide the community an opportunity to review the test results and provide input to DTSC prior to the final termination of Corrective Action at the facility.

It is understandable only because I happen to be a witness to a conversation between Mayor Richard Riorden and my husband, who was at the time the Chairman of the South Coast Air Quality Management District. They devised a plan to blame cow urine on the PM-10 in the basin. They went so far as to discuss how all of the cows must get up and urinate at midnight, because the air quality monitors showed spikes at that time. That is likely a few other of Mayor Riorden's friends smokestacks going at that hour as well.

Link up with the Rich and Powerful; and put pressure on the local politicians: It is not insignificant that Catellus, the state's largest landowner, realtor for the railroads who received 100 million acres of land from the U.S. government, has a housing project right next door to the Aerojet site that they are pushing to develop. It is not insignificant that Chino Hills is financially strapped (of course, look at all the water they had to buy to replace the arsenic-laden well water), and that David Ariss and Frank Williams are pushing these housing developments now, saying, "No commercial development until we see more rooftops." David Ariss is an old military guy, who works for Lusk and Lewis Homes and Kaufman & Board, and pays off all the politicians. Of course, Supervisor Fred Aguilar spent his pre-political career working for Lewis Homes, which has linked up with Kaufman & Board, and now stands ready to gobble up the entire agricultural preserve. And Frank Williams is the head of the Building Industry Association and represents a lot guys who can't wait to turn vacant land into dollars.

Comment noted. DTSC is committed to clean up the property regardless of the intended redevelopment. The clean up will reduce future risks to the community from chemical contamination and UXO and it should benefit current residents of Chino Hills as well as others who may visit and use the site in the future.

Now if a real EIR is done, the true facts that Aerojet is a contaminated site that should never have homes built on it now or in the future, and that the contamination has likely migrated to the Catellus site as well, might get out. We can't have that, can we? That will stop development. It will create a "stigma." It is better to transfer the property to as many different people as possible on as dense a development as we can get, so that down the road, two or twenty years, when the cancers start appearing, we can be gone and the land will be in the hands of many people for whom their home is their primary investment, thus no money nor inclination to sue Aerojet, and we will have a nice paper from the DTSC saying we did everything the consent decree required, and we are

released from all liability. Then, after polluting for 40 years, Aerojet can pick up a few million for development of this property.

As stated earlier, DTSC is very concerned about protection of human health and the environment. DTSC will not proceed with a clean up project if it doesn't meet the objective of reducing the potential threat to human health or the environment. The objective of the Corrective Measures is to remediate the property so that the land can be reused without health risk to future occupants of the site. As part of the Corrective Measures, confirmation sampling will be conducted to document that cleanup goals have been met. The public will have an opportunity review the results of the cleanup and provide input to DTSC prior to termination of Corrective Action. DTSC will not allow residential land use unless the performance standards for residential land use are met. Proposed future development plans for the site are not part of the Corrective Measures cleanup project and would not be addressed in the CEQA documents prepared for this project.

DTSC has evaluated the results of soil sampling data collected on site, and has reviewed the results of the Health Risk Assessment. DTSC has concluded that the constituents of concern evaluated in those documents are not and have not migrated off site. In addition, DTSC has evaluated the results of surface water sampling for those same constituents of concern and has determined that the levels of explosive chemicals in surface water do not adversely affect human health or wildlife. Sampling of sediments in two drainages north of the site has revealed no evidence of contamination; therefore, migration of contaminants in surface water off-site to the north is unlikely. Facility operations involving hazardous waste or hazardous constituents were primarily conducted in the southern portion of the facility, and not along the ridge top from which these two drainages originate. DTSC has also evaluated the geology of the site and concluded that it is very unlikely that contaminants in shallow groundwater at the facility have migrated off site.

Of course, Aerojet is getting Congressman David Drier to give them \$100 million of taxpayer money to clean up the mess they made. It pays to pollute, especially if it is in the service of creating and testing weapons of mass destruction. War is good.

Prior to that, of course, Aerojet paid hundreds of thousands of dollars to Jay Kim's engineering company, to say that the best use for the site is to put houses on it. Then Kim illegally contributed \$400,000 of that money to his own campaign for Congress, which bought him a few years and lots of contributions from his Korean corporate friends. When they found him guilty of campaign violations, they gave him an anklet to wear in Congress and a few fines, which he now attempts to dump in bankruptcy court.

The contractor for the Corrective Action project is McLaren/Hart. McLaren/Hart conducted it's own independent investigation of the facility. Metals data collected by Jaykim was used as part of the RFI investigation at SWMU #6, the Caustic Ponds, SWMU #7, the former Redwater Pond, SWMU #8, the HEI Pond and at SWMU #19A, building 035. Otherwise, McLaren/Hart collected independent data and used that data as the basis for their conclusions in the RFI Report and RFI Addendum Report. Jaykim Engineering was under contract to Aerojet to provide the Closure Plan for cleanup of the OB/OD area. DTSC reviewed this plan and required numerous changes to the plan before it met the regulatory and technical requirements for Closure. The Closure Plan field work was conducted by Dames & Moore, not Jaykim, and this work is presently being reviewed and continuing field work overseen by McLaren/Hart. However, the decision for remediation of the property is based on evaluation of information from a number of different sources and is not affected by a sole contractor. DTSC's oversight is to ensure that the cleanup of the property is conducted in accordance with national and state standards and that the property will be remediated for the benefit of the community as well as the environment.

Deceit and obfuscation:

I will cite only a couple examples.

Aerojet assures us that there is nothing to be concerned about for your families. The real place we are polluting is at our plant in Azusa; we just tested the weapons here. On top the hills where the wind blows everyday, they blasted materials that were carried for miles all over the inland valley. Now people are getting sick but there's nothing to worry about, it's perfectly safe.

DTSC representatives were sorry to hear of the health issues affecting Chino Hills residents. DTSC is committed to ensure that all communities, including Chino Hills, are protected from harmful exposure to hazardous constituents arising from facilities under our jurisdiction. We have thoroughly evaluated the sampling data collected both on and off the site, and believe that present site conditions do not pose a risk to off site residents. As stated in the response to General Comment 4, DTSC is evaluating current levels of uranium at the site. However, the possibility of dust from the facility blowing off site and affecting the health of residents was evaluated in the Health Risk Assessment, and determined not to be a significant risk. For information on a recent cancer study, please see the response to General Comment 2.

The deformed frogs are from bacteria.

DTSC evaluated the information provided in the ecological risk analysis for RDX and perchlorate and found no evidence which suggest that these frog deformities are caused by contaminants from the Aerojet facility.

Perchlorate is "non-hazardous."

The levels of perchlorate detected in surface water at the Facility range from 5.1 ug/L to 83.2 ug/L. The health risk assessment concluded that these levels are not harmful to wildlife or to humans assuming incidental ingestion. A perchlorate level of 877 ug/L has been detected in localized groundwater at 35 feet below ground surface in the Upper A-12 Test Area. At the present time, there is no complete exposure pathway for humans or wildlife to be exposed to this water, and, if the water cannot be removed from the subsurface, DTSC will require provisions in the Long Term Operation and Maintenance Plan to ensure that future users of the site will not be exposed to this water. Please see section II for further information.

The radioactive dirt is non-hazardous. Well, of course, hazardous waste is a particular type of waste that under the Code of Federal Regulations does not include nuclear waste, which has it's own set of rules.

Transport of the depleted uranium-contaminated soil at Aerojet was conducted under the jurisdiction of the Department of Health Services in fully enclosed containers. You may wish to contact the DHS project manager, Mr. Jeff Wong at (510) 540-2360 for details regarding the regulations for transport of this soil.

Not a penny of tax-payer money will be used for this clean-up. Note discussion above.

DTSC is not aware of any federal grants to Aerojet for the clean up of the Chino Hills facility at this time. Furthermore, DTSC holds Aerojet liable for the cost of the investigation and clean up at the facility. To date, DTSC believes that Aerojet has paid for all the RFI activities and has not sought financial relief from the government to clean up the Chino Hills facility. However, regardless of the source of the funding, DTSC maintains that the contaminated sites at the facility should be remediated to further protect human health and the environment at the facility – regardless of future reuse plans.

No water on the site. How do we have wells on the site if there is no water? And they say one well on the site was not tested.

Pollutants could not get to the ground water from the Aerojet site because there is no "water table" under the site. Semantics. There is an aquifer. One could go on.

Isolated surface water and subsurface water (in localized occurrence and limited quantity) is present at the site. However, the rock formations beneath the site have been classified as relatively impermeable and unsuitable for groundwater production. For further information on the description of deeper groundwater under the site, please see the response to General Comment 7 and the memo prepared by Paul Carpenter, DTSC geologist. A copy of this memo is included as Attachment D in this Response to Comments. Sample results indicate that no contaminant has left or is leaving the Facility in either surface water or groundwater at concentrations that pose a risk to human health or the environment. For further information on testing of groundwater and surface water at the site, please see the response to General Comment 7.

I respectfully request the Department of Toxic Substances Control, in light of all of the concerns raised by the members of this community, and high in light of the issues raised herein and in all of the comments submitted orally and in writing on this record, to require an EIR of the project proponent, giving the people their right of due process. I ask this on behalf of all the children who are to come.

Please see response to General Comment No. 3.

Questions and Comments Submitted by Marjorie Musser Mikels, June 30, 1999

I hereby incorporate by reference all comments made in my May 28, 1999 letter to Ms. Vicki Tamoush, and briefly supplement those comments as follows.

Meetings held in June, since the May 28th date, have uncovered the following additional alarming news. Several children in close proximity to the Aerojet facility have neuroblastoma, a malignant tumor of embryonic ganglion cells, and two children in the Aerojet vicinity recently died from this rare disease. I am informed and believe there are only about 500 of these cases nationwide, but at least three children with this disease are within a mile or two of this facility.

Please see response to General Comment No. 2.

We also learned, at the City Hall meeting (June 3, 1999) that kids playing in the creek that runs through Carbon Canyon developed "weird skin diseases." Aerojet has blatantly lied to the people saying there is "no water in the creek--it's just a dry arroyo," but members of the public testified that winter rains cause the creek to have water in it every year until about July. This water runs off the Aerojet site--and has not been tested for contaminations.

The Soquel Canyon Creek and its tributaries that drain the Aerojet site is an intermittent (seasonal) stream that flows during the rainy season. It is normally dry during the summer season. Surface water on the Facility was sampled for chemicals of concern. Human health risk and ecological assessments of explosive chemicals detected in the surface water at the site demonstrate that their occurrence at the detected concentrations does not pose a risk to human health or the environment. A perchlorate level of 83.2 ug/L have been detected in Soquel Canyon Creek where it exits the facility to the southwest; however, testing 1.75 miles downstream revealed no detectable levels of contamination. There is no evidence that perchlorate at this level causes "weird skin diseases".

Aerojet falsely represented to the people that there was no way contaminated from the site could have gotten into the people's ground water because of the shale like composition of the hills underlying the site. But citizens and

homeowners in the area testified that all one must do is dig down about three feet, as one gentlemen did to lay a pipe in his back yard, and note that the ditch or hole fills up with water, showing the aquifer is very close to the surface and indeed there is plenty of underground water subject to contamination from Aerojet's red water pond, or caustic pits into which they poured poisons for years in deliberate indifference to the impact on the ground, water and air (evaporation).

The rock formation beneath the Chino Hills can collect and hold water during the wet season. However, these rocks typically do not transmit appreciable amounts of water. Unlike the hydrogeologic conditions beneath the facility, groundwater is found throughout the Chino basin in appreciable volumes. However, this is not the same subsurface water from the Facility nor is it "connected" to the Facility. For further information on the hydrogeologic conditions at the site, please see the response to General Comment 7 and the memo prepared by Mr. Paul Carpenter, DTSC geologist, included as Attachment D of this Response to Comments.

One of the most amazing admissions made at the June 3, 1999, by Aerojet, was that they have not even tested, nor sampled the surface and ground water on and off the site, to determine radioactive materials levels. This is incomprehensible. When a known defense contractor, testing weapons of mass destruction and exploding depleted uranium, (an alpha emitter) is supposedly "cleaning up it's site," why is no one testing for ionizing radiation? Obviously, alpha particles are known to cause leukemia and cancer in children, in particular. While alpha normally does not penetrate adult skin, children's skin is penetrable. And anyone can ingest alpha particles by breathing the air or drinking the water. Aerojet plans to complete its clean-up by further explosions and burning. Certainly there is a fair argument that such methods may have a negative impact on the water, air and soil in the region, even with the proposed mitigations.

As stated in the response to General Comment 4, DTSC will require Aerojet to evaluate surface and subsurface water for the presence of uranium

The clean up project does not involve the burning or detonation of armor piercing incendiary (API) projectiles composed of depleted uranium. APIs do not contain explosive materials and thus are not detonated

As stated earlier, no nuclear weapons activities were conducted at the facility.

We can not detect alpha, beta and gamma with our human senses--can't taste, smell, see or hear ionizing radiation. So maybe Aerojet decided to make a quick escape with a nod of complicity from the Dept. Of Toxic Substances Control, before the cancers, which often take 2 to 25 years to develop after radioactive particles are lodged in the human organism, start appearing on a broad scale.

Please see the response to the above comment.

We know the lack of testing of the water for radionuclides is not because Aerojet does not know their site is hot and that their operation involved radioactive materials emissions.

At least twice a year, Heligson Scientific, from Pleasanton, CA, brought their truck up to Aerojet to run whole body counts, testing Aerojet employees for radiation contamination. These tests would go on for two or three days, with 75 employees being tested at any one time, according to participants. The last of these tests were held only 4 or 5 years ago. Some of the employees registered severe contamination. Yet, Aerojet reports finding and talking to only eight former employees. We, the public, are not told who these employees are, how they were selected or what those employees reported. But one lady who attended the June 3, 1999, meeting said she was employed by Aerojet for 15 years--and was never notified or questioned by anyone in conjunction with the cleanup plan. In fact, she appeared at the city hall meeting only because she read about it in the local paper.

She said she had never seen Don Vanderkar, the purported expert, before that night and he certainly had no supervision or oversight responsibilities of the operation at the Chino Hills site.

Employee interviews conducted as part of the RFI focused on identifying the potential environmental concerns with respect to past operations at the site and the potential for soil and water contamination as a result of these operations. Please see the response to the comments made by Ms. Judy Morton (question nos. 23, 24 and 27) on pages 54-56 and comments made by Todd and Karen Miller (question nos. 1 through 4) on pages 47-48 for further information regarding the employees that were interviewed.

Finally, at this time when the Regional Quality Control Board is participating with a task force to deal with nitrogen-nitrates in the water in the Santa Ana River Water Shed area, by what authority and on whose agreement is Aerojet being allowed to avoid all tests of nitrogen, nitrates, and nitrites from on and around their facility and the surrounding properties? Simple farming operations in the Chino Valley are being required to hire engineers to test and take steps to remove nitrates from their operations. But Aerojet doesn't even have to test? Because a few cows may have wandered around the Chino Hills, nitrates, known to be used in explosives and salts, known to be created at weapons facilities will not even be identified or tested? Blame the docile cow.

As mentioned in the response to your comment on page 40, DISC will require Aerojet to collect samples and test for nitrates in surface water and groundwater. Please note, however, that elevated levels of nitrates found in the Santa Ana Watershed are generally believed to originate from regional farming/agriculture practices. Please see the Santa Ana Watershed Basin Plan or contact the Santa Ana Regional Water Quality Control Board for further information.

By what authority is Aerojet allowed to pollute the environment for forty years and then quickly depart by burning and exploding the evidence behind them all under a negative declaration and "consent decree" issued by DTSC? What members of the community were given the opportunity to "consent" to that deal?

The site is being cleaned up under a consent agreement between Aerojet and DTSC. The Consent Agreement does not relieve Aerojet from the responsibility to remediate the site, on the contrary, it requires Aerojet to clean up the site in accordance with DISC approved clean up standards and safe practices. The public will continue to be kept informed of the clean up activities at the site through periodic meetings, fact sheets and public notices in accordance with the procedures specified by law and regulations. Under the law, the public is given the opportunity to participate in the cleanup decision. DISC will continue to offer public participation opportunities to all interested parties.

By what authority is Aerojet allowed to escape liability for poisoning water in Chino Hills inevitably resulting in great public expense to purchase water from exporters from other basins, and leaving deaths and diseases behind them, with no funds to which the victims can turn to pay their medical and burial expense?

Aerojet is held liable for all contamination at their Chino Hills facility. The public supply wells from which the City of Chino Hills draw its public water supply are located in an aquifer upgradient from the Aerojet site, and therefore do not have the potential to be impacted by contamination in localized groundwater on the Aerojet Facility.

This plan is not a "Clean Up"; it is a cover up. If they don't test, then the public won't know. If the public does not know, then the victims cannot prove that the proximate cause of their deaths, injuries and diseases is Aerojet's contamination of the air they breathe, the water they drink and the soil on which they live.

Please see response to General Comment Nos. 1 and 2.

Aerojet has made millions of dollars in Chino Hills over many decades. For them to just pick up without an environmental impact report, without compliance with laws applicable to any project reasonably anticipated to have negative impacts on the environment, would be a gross abuse of power by the officials responsible to protect the citizens of our state and region. I believe it would also violate the terms of the agreement whereby the state monitors radioactive materials within our borders. Being an "agreement state" does not mean free license to let contractors harm and kill our children, then escape quickly before liability is discovered and attached and sell the poisoned site for millions of dollars--- leaving the devastating consequences for future generations to bear. DTSC is supposed to do more than pass out awards for companies that pay blood money into their coffers. It is an agency charged with protecting the health and safety of the people.

DTSC will continue to uphold our mandate to protect human health and the environment and will continue to hold companies liable for the degradation of the environment and the remediation of contamination that have an adverse impact on human health. DTSC must, however, base our clean up requirement decisions on scientific facts and information available to date. The Health Risk Assessment did not indicate any adverse impacts to the off site community from present site conditions at the Aerojet facility. Based on the information collected to date, DTSC agrees with the scope of the remedy and has added additional safeguards to further protect human health and the environment. Please see the description of the Corrective Measures and the Conditions of Approval for Corrective Measures in Section II of this Response to Comments.

The people of the community of Chino Hills are entitled to, at minimum, an Environmental Impact Report. They need money to conduct independent testing of their ground and surface waters, and their soil. They need professionally conducted health risk assessments in their community. They need liability funds established. They deserve to be told what radionuclides are in their water, what contaminates Aerojet has left behind, and what other toxins were introduced into their environment to which they have been and will continue to be exposed. The reports thus far are inadequate.

For information on an Environmental Impact Report, please see the response to General Comment 3.

As stated in the response to General Comment 5, IAG grant funds are not available for the Corrective Measures project

A Health Risk Assessment has been conducted, and the results demonstrate that present site conditions do not pose a risk to the off site community. Please see the response to General Comment 6 for further information. Please see the response to General Comment 2 for the results of a community cancer study conducted in the Chino Hills area.

The Consent Agreement requires Aerojet to establish a mechanism for financial assurance for implementation of the Corrective Measures and the long term Operation and Maintenance requirements.

As mentioned in the response to General Comment 4, DTSC is adding uranium as a constituent of concern based on kidney toxicity.

By what authority can you deny the Citizens residing near the Aerojet site's reasonable requests? Please do what is right.

DTSC has seriously evaluated all comments and requests from the community. We believe that the additional protections and outreach that have been added as a result of community concerns will provide adequate protection of human health and the environment. Please see the description of the Corrective Measures in Section II of this Response to Comments.

Questions and Comments Submitted by Todd & Karen Miller

1. ***How long have the people who are claiming to have knowledge of the Aerojet situation been with the company?***

The primary interviewed employees who provided the most information on the Facility operations had been employed by Aerojet for 8 to 33 years with an average length of employment of 19 years.

2. ***Where has the information that has been given to the public during the previous two meetings come from? Is it from Aerojet records or from employee interviews?***

The information presented to the public has come from a variety of sources; including Aerojet records, current and former employee interviews, aerial photographs, site historical photographs, public records, agency files, previous site investigation, regional site investigations, sampling results and other scientific data sources. This information is documented in various reports on the Facility that are available to the public at the Chino Hills library.

If interview were conducted:

- a) ***Who was interviewed?***

Current and former employees who possessed first-hand knowledge of past Facility operations were formally interviewed. In addition, other employees who had been working at the Facility for several years were informally interviewed.

- b) ***Were they sworn to tell the truth?***

The interviews were not part of any court testimony. Those interviewed were asked to provide their best recollection and had no reason not to tell the truth.

- c) ***Who was present when these interviews were conducted?***

McLaren/Hart representatives conducted the interviews. Aerojet representatives were usually present.

- d) ***Is the testimony enforceable by law, and will it hold up in court?***

The interview process was never intended to be part of any court record.

If the information came from records:

- a) ***Can these records be disclosed to the public?***

All records relevant to the Facility were summarized in RFI documents and are available for public review at the library or the DTSC office in Cypress, California.

- b) ***What year were the records created, and what years do they cover?***

Most records cover the past 20 years of operations.

3. ***Please provide a list of retired managers who were responsible for knowing the activities at the Chino Hills Aerojet facility including Plant Managers, Safety Managers, R & D Engineers, Test Engineers, and Project Engineers, especially those who were party to the environmental desecration.***

These records are private and under State of California law cannot be released.

4. *Have you interviewed all retirees who are still alive who have in-depth knowledge of the activities of the plant, and those persons who were in any management position from 1953 on?*

As stated by McLaren/Hart in the June 7, 1999 meeting, the oldest employee interviewed began working at the Facility in 1960. This former employee had extensive second hand knowledge of operations that occurred at the Facility since its inception in 1954 and extensive first hand knowledge of operations after 1960. McLaren/Hart and Aerojet were not able to identify anyone who worked on the Facility that had first-hand knowledge of Facility operations between 1954 and 1960.

5. *Since the people representing Aerojet have already been caught in several lies, what steps are being taken to make sure that the true facts are being brought out?*

DTSC as the lead agency overseeing this investigation has reviewed a number of documents related to the site investigation, including workplans, the RFI Report and the RFI Addendum Report. To verify that the documents have adequately evaluated the contamination at the site, DTSC looks for inconsistencies in the documents, compares the information presented with DTSC's experience on other similar sites, and takes split samples to verify the accuracy of sampling. As a result of our review, DTSC has not found any evidence that would lead us to believe that Aerojet has presented false information about past operations at the Facility. Please see the response to General Comment No. 1.

6. *Have efforts been made to substantiate the claims that 9 students in one elementary class at Los Serranos Elementary School came down with cancer at approximately the same time; and that there are an inordinate number of cancer cases in the Rainbow Ridge area, which is in the path of the drainage from Aerojet?*

Please see response to General Comment No. 2

7. *Has it been proven that there are no storage tunnels containing toxic materials running from Aerojet facility underneath Chino Hills?*

Based on observations made on visits to the site and review of facility files, DTSC is certain that no such tunnels exist or were ever constructed at the Facility.

8. *Why were toxic materials moved illegally and without informing the State Highway Patrol?*

According to Aerojet and McLaren/Hart representatives, toxic materials were not moved illegally from the site. All soil transportation activities occurred during the daylight hours in accordance with DOT rules and regulations. Please see the project description in Section II of this Response to Comments for more information regarding requirements for trucks carrying contaminated soil from the Facility during the implementation of the Corrective measures.

Questions and Comments Submitted by Judy Morton May 25, 1999

I would like to request a continuance on the comment period with regards to the Chino Hills Aerojet facility clean up measures. I would like it to be continued for another month, until June 28, 1999. I had gone to the library to find the new material about the clean up on the site and was not able to locate it. Joe Bahde with McLaren & Hart has informed me, that the RCRA addendum and the DU clean up procedures would be at the Library by today. Today, I was able to read a little of the updated materials but have not had ample time to finish reading all of the new materials.

I am very interested in the project as noted before in previous letters of concern to your department and meetings held in my home. I have a lot of concern about the project and feel it is my civic duty to keep abreast of the local clean-up procedures with regards to Aerojet. As a concerned citizen and a very involved citizen in the project, I would like more time to learn about the latest changes to the old RCRA 1996 report and with respect to the new addendum dated 1999.

DTSC provided the additional time for public comments as requested.

Question and Comments Submitted by Judy Morton, May 28, 1999

I am submitting my questions with detailed explanation. After my last submittal of overall concerns in 1997, I have realized that there needs to be a small overview attached. I hope this will help you in your process of providing answers to my questions promptly and accurately.

I appreciate the help that Christine Brown has been. Also, the fact that she and Vicki Tamoush did come by my house to try and address some of the concerns was helpful. I thank both of them for their support with respect to this project. Hopefully, a continuance on the comment period will be increased another month and we will have time for more dialogue. I would like to request another meeting with Christine Brown before the extended comment period ends.

1. *Why wasn't an Environmental Impact Report done in addition to a risk assessment?*

Other cleanup sites have to done EIR, before they start the cleanup process. These are people that are located within a mile from the facility. These are people that have been able to see the explosions at the site from their backyards. They were able to see the explosions jet up to 50 to 100 feet from the small bunker tunnels used for testing. This is very close and considered a very sensitive area. The cleanup project should have never been attempted had it not had an EIR first.

During the original McLaren & Hart RCRA investigation of June 6, 1996, it was noted on page 3-1, par 3, line 1, "No Sensitive Areas". The report stated that the nearest residential area was 1.25 miles from the facility. That was incorrect. These are homes a half of a mile from the facility. (Refer to fig.3-1 & 3-2). They have been there since the 1970's. They also stated that there were no schools within the two-mile radius marker. That was wrong. There are exactly 4 schools within a two-mile radius of the facility. (Fig. 3-2). My house backs up to Woodview and the trucks transport the soil drive right behind it. That puts my property 10 feet from the contamination on those trucks.

See response to General Comment No. 3. Pursuant to Public Resources Code Division 13, Sections 21000 through 21177 and in accordance with the California Environmental Quality Act (CEQA), before DTSC can approve a project, it must conduct an environmental analysis to determine if approval of the project may result in significant

adverse effects upon the environment. This environmental analysis, or Initial Study, contains factual evidence to support the finding concerning the impact of the project on specific aspects of the environment, including (among others) the impact on earth, animal life, air, land use, etc. The findings of the Initial Study are used as the basis for deciding whether an Environmental Impact Report (EIR) is warranted. If no significant impacts are found based on the findings of the Initial Study, the lead agency may adopt a Negative Declaration without conducting an EIR in accordance with the law.

DTSC completed an Initial Study for the clean up project and concluded that the project will not have any adverse impacts. Furthermore, the project does not require any additional mitigation measures beyond those activities already incorporated as part of the project description. Therefore, DTSC proposed and has approved a Negative Declaration for the project.

2. *Did the incorrect information of the distance from the homes with respect to the cleanup, make an EIR not needed?*

No. An EIR was not prepared due to the findings of the Initial Study for the Corrective Measures project.

3. *I request an EIR be done on the clean-up process.*

An EIR is required to be done, if there is a risk that the environment may be affected. The clean-up process at Aerojet has already affected the environment. It was stated in the RCRA Facility Investigation Addendum Report, Aerojet Facility, Chino Hills, dated 1999. The report by McLaren & Hart stated that in their estimation why the growth in the levels of Perchlorate found in the wells after a few months was due to the excavation of soil off the site. They attributed it to the mud stuck on the big dirt dump truck tires and thus spreading the Perchlorate in higher levels to other areas on the site. They admitted that the cleanup procedures have helped to contaminate other areas on the site's property, as well as contribute to higher concentrations of perchlorate in wells where the levels were lower during previous tests.

I too have already been affected from the dirt coming down the hill and being transported off the site via Woodview behind my house. I have inhaled the dirt coming from those trucks, because the truck drivers failed to have their trucks fully covered with tarps. If an EIR would have been done, this assessment of possible threat would have been assessed and fully sealed trucks would have been requested. We must not allow any further contamination of my neighbors and myself.

As stated in DTSC's response to your question No. 1, an EIR was not prepared for this project because the Initial Study concluded that there were no significant environmental effects.

The statement concerning the truck traffic area and the truck tire tracks as the potential source of perchlorate is related to the very low concentrations of perchlorate detected in the stream bed surface water near the center of the Facility and near the soil excavation area (Upper A-12 Test Area). This is the only occurrence of perchlorate in surface water that was attributed to the removal of perchlorate-impacted soil at the Facility. Furthermore, this occurrence of perchlorate due to the soil excavation does not significantly impact the surrounding environment or the nearby community. This is demonstrated from perchlorate not being detected in any groundwater well, on or offsite, or in any soil offsite. The other possible source of perchlorate in surface water is the landfill, which may be the source of perchlorate levels in the landfill creek. The health risk assessment demonstrated that the levels of perchlorate in the landfill creek do not pose a significant risk to wildlife or human health. The reported detection of perchlorate in a municipal well located in the City of Chino is not related to the Aerojet Chino Hills facility

operations. Please see the memo prepared by Paul Carpenter, DTSC geologist for further information. This memo is included as Attachment D of this Response to Comments.

4. *I want to know exactly what was in the dirt that my neighbors and I inhaled directly?*

Other than the report by Ms. Morton, DTSC and Aerojet have no information regarding dirt or dust escaping from trucks associated with transportation of materials from the Facility. Other ongoing construction projects or operations in the area not related to Aerojet may use Peyton and Woodview Drives as a transportation route.

5. *I want to know why the safety protocols they are going to enact now, for the trucks hauling dirt off the site weren't enacted with respects to other shipments in the past? I.e. Brushing down the trucks to get the dust off, check points to make sure the tarps are secure, etc.*

Now they realize, that they need check points to verify that the trucks are secure? Why are they now brushing down the dirt from the trucks? Why weren't these procedures enacted earlier? Why wasn't this precaution taken?

Please see Section II of this Response to Comments (pages 2-3) for information regarding the requirements for trucks carrying contaminated soil from the Facility during the implementation of the Corrective Measures.

6. *I also request that any shipments of dirt that are transported off the site be in sealed container trucks.*

Potentially, I don't want the tarps flapping in the wind again. At the 5/25/99 meeting, McLaren recommended that the tarps still be used during future shipments off site. This is still unacceptable. Completely sealed containers must be used.

Please see the response to the previous question.

7. *I want an exact list of the contaminants that were already hauled off the Aerojet site. Meaning i.e.: Radioactive depleted uranium dirt, or depleted uranium shells, or just toxic chemicals. What was in the dirt?*

Soils previously transported offsite include residues of explosives (predominantly RDX) from cleanup activities at the OB/OD area, petroleum hydrocarbons from the removal of an underground storage tank (UST), depleted uranium, and perchlorate from area A-12.

8. *How much dirt has been hauled off the site?*

Estimates of the materials listed in the response to Question No. 7 include:

▶ RDX-contaminated soil from the OB/OD area:	1,700 tons
▶ Soil contaminated with petroleum hydrocarbons/MTBE from UST:	1,432 tons
▶ Depleted uranium impacted soil:	Approximately 3,100 tons
▶ Perchlorate from Area 12:	364 tons

9. *Were water trucks used to water down the soil during excavation?*

Yes. In all areas where water trucks could be safely driven without accidental detonation of unexploded ordnance.

10. *I would like a list of the exact dates those were hauled off the site, with descriptions of what was contained in those loads, on what specific dates, and the containers or methods used to transport the contaminated soils, that could not be cleaned?*

Please refer back to each manifest for the facility.

The RDX-contaminated soil from the OB/OD area was transported to Laidlaw Environmental Services (now Safety Kleen) in Buttonwillow, California in tarped trucks (non hazardous waste manifest) from October 11, 1997 through October 13, 1997. This project is under DTSC jurisdiction.

The soil contaminated with petroleum hydrocarbons and MTBE was transported to Thermal Remedial Solutions in Azusa, California on November 11-16, 1998 in tarped trucks (non hazardous waste manifest). This project was under the jurisdiction of the San Bernardino County Fire Department.

The soil contaminated with perchlorate was transported to the Kettleman Landfill in Kettleman City, California on November 18-19, 1998 in tarped trucks (non hazardous waste manifest). This was conducted as part of the RFI investigation and is under DTSC jurisdiction.

The depleted uranium contaminated soil was transported to Envirocare in Salt Lake City Utah. Soil was shipped between the dates of February 11, 1997 and August 20, 1997 in fully sealed containers. The transport of this soil was under the jurisdiction of the Department of Health Services, Radiologic Health Branch. You may wish to contact the DHS project manager, Jeff Wong, at (510) 540-2360 for further information.

11. *I want to know why a lot of activities at Aerojet were done at night?*

As stated by one of the residents off Medlar and Woodview road, A lot of activity occurred from 11:30pm to 3:00am. Trucks were hauling stuff off the site, all night long. This went on for the last few years. She would walk her dogs during that time and see the activity of trucks coming up and down the road to Aerojet.

As documented by the information provided by the facility in August and September 1999 and attached to this Response to Comments, much of the truck traffic at night consists of hauling hay and other materials related to cattle, and oil products from the oil drilling operations not related to the operation of Aerojet (See Attachment H for copies of the information provided by Aerojet). As described in earlier response to similar questions of this nature, no remedial activities occurred at the Facility at night.

12. *What actually was done during the hauling off the site at night?*

Please see the response to question No. 11.

13. *What clean-up was done at night?*

No clean-up occurred at night on the Facility. See response to question No. 11.

14. *Why was Aerojet cleaning up at night and not during the day?*

See response to question No. 11.

15. *I want to know why my neighbors and I weren't notified of the shipments of toxic material off the site? We are located .75 miles from the site in a sensitive area. The trucks travel right behind our homes, which are located 10 feet from the road that the trucks travel on. We should have been warned. This is health hazard and we needed to be notified.*

DTSC apologizes and will provide the community with advance notice in the future regarding the projects under our jurisdiction. Prior to the public comment period in 1999, DTSC was not aware of the high level of community interest in the project, based on the community response to the community survey in Fall of 1996 and the fact sheet mailed in Summer 1998. We regret that we did not provide more information regarding the projects under our control, removal of the RDX contaminated soil under the OB/OD closure and the removal of perchlorate contaminated soil in November 1998. The other projects, removal of the petroleum hydrocarbon contaminated soil and depleted uranium impacted soil were under the jurisdiction of the County of San Bernardino Fire Department and the Department of Health Services, Radiological Health Branch.

16. *I want the whole site in its entirety tested for Dioxin. I want the dirt to be tested. Dioxin is a long time known cancer causing agent. I want the dirt tested out from the center of the site to a radius of .75 miles, at incremental depths of 1 foot, 2 foot, 3 foot all the way to 45 feet. I want the run off water toward the existing homes on Woodview tested for Dioxins. I want the ground water tested for Dioxin. I want the wells, including the Walking-Beam well tested for Dioxin and Perchlorate. I want the Northern, Southern, Eastern and Western run off water tested for Dioxins. Even though Aerojet says they never tested Agent Orange up there, there is no telling what the military did up there, and so it needs to be ruled out completely.*

The only areas under Corrective Action project at the facility having the potential for dioxins to be present are the two former burn areas, SWMU #1 and SWMU #9. These areas were tested and in only one instance concentrations exceeding human health-based cleanup levels (HBCLs) were detected. This area, containing approximately 6 yards of impacted material, will be excavated and removed from the site as described in the Corrective Measures Workplan. DTSC believes that the RFI has adequately determined areas of potential concern and the additional sampling as suggested would be unreasonably costly and impractical and not yield additional information for additional environmental protection.

17. *When was the Navy up at Aerojet?*

There are entrance logs for the last 40 years. Please refer to them.

According to Aerojet, the Federal Government entered into numerous contracts with Aerojet and as the result, all military forces, including the Navy, have visited the site on numerous occasions to inspect and oversee various operations. Reviewing visitor daily logs for 40 years of operations is not a reasonable request. The number and frequency of Navy personnel (or other military service personnel) on the site in no way affects the scope of the cleanup. Cleanup is driven by regulatory requirements, analytical data results, and risk assessment calculations.

18. *How many Navy personnel were there at one time?*

A local farmer says the Navy was on the site performing some type of training for four years. This is more than Aerojet has spoken of the Navy's involvement up at Aerojet. Since Aerojet owned the property, there needs to be disclosure about what the Navy was actually doing at the site. If they polluted the site, they need to know they should clean it up, too.

According to Aerojet, Navy and other military personnel visited the site on numerous occasions for varying periods of time to review or oversee ordnance testing operations to verify compliance with contract specifications. As stated in the response to question 17, the number and frequency of Navy personnel on the site does not affect the scope of the cleanup.

19. How many of the Navy personnel were on the Chino Hills Aerojet site at one time, and over the course of Aerojet's contracts?

At the 5/25/99 meeting with Aerojet and Chino Hills resident at Townsend Junior High, Edith Cartwright suggested that the daily Logs be checked for those former Navy visitors on the site. I think that is a great idea. I would like those daily sign-in logs to be researched for how many Navy personnel actually came to the site. Record their names and numbers so that we can get a better picture of what was actually gone on up there. A good clean-up is the result of a good historian. The cleanup will only be as good as the knowledge that is provided. Aerojet still needs to dig deeper.

I am not asking for their names. I am asking for 'how many personnel'.

See response to questions No. 17 and 18. DTSC does not have any information relating to the number and frequency of military personnel visiting the site because it does not affect the scope of the cleanup. Cleanup is driven by regulatory requirements, analytical data results, and risk assessment calculations.

20. Why has the Navy's involvement with Aerojet not been spoken of? It was stated by an ammunition specialist at the 5/25/99 public meeting in Chino Hills that the Navy was at the Aerojet site during different times of the Aerojet's operation.

As reported in the response to Question No. 17, the number and frequency of Navy personnel on the site does not affect the scope of the cleanup.

21. What did the Navy do at Aerojet when they were there?

See response to questions No. 17, 18, and 19.

22. Did the Navy test Agent Orange at the site?

No. There is no information to suggest that Agent Orange was tested at the site.

23. I want to know how many past employees worked at the Chino Hills Aerojet site.

The number of employees varied based on the project demands at any given time. In recent years, approximately 250 employees worked at the Facility.

24. I would like to request all past employees to be contacted about this site.

Eight current and former employees with direct knowledge of Facility operations that could be located were formally interviewed, and between 5 and 10 additional employees were informally interviewed.

25. I want to know the ex-employees health conditions. Are they still alive? How long did each employee work at the facility?

From my conversation with the Aerojet panel on 5/25/99 at the meeting at Townsend Junior High in Chino Hills, they said that only 5 former employees could only be contacted. Also, they said that an employee that did not provide a lot of helpful information had disappeared or Aerojet has lost contact with that employee.

During discovery and information gathering about 41 years at Aerojet, more employees should have been located. It needs to be done now. We need to locate as many of the old employees as possible, to ask them questions regarding the site. Records have been lost, therefore, history has been lost. We need a lot more eye witness accounts of the area. There needs to be employees contacted for the 10 years of operation, the second 10 years of operation, the third 10 years, and the fourth 10 years of operation, until present.

As mentioned earlier, eight current and former employees were formally interviewed, and between 5 and 10 additional employees were informally interviewed. Private employee health information is not available and cannot be provided under State law.

26. *I would like to request personnel to be contacted from all years of operation. From the 1950's till present.*

See response to question No 24

27. *I would also like to know the duration of years that each of those 5 employees used during the discovery phase, were employed at that specific Aerojet site in Chino Hills?*

Example:

Employee 1: 19xx - 19xx

Employee 2: 19xx - 19xx

Employee 3: 19xx - 19xx

Employee 4: 19xx - 19xx

Employee 5: 19xx - 19xx

Eight current and former employees were formally interviewed as shown below:

1. 1962 through 1993
2. 1987 through 1995
3. 1981 through 1995
4. unknown
5. 1978 through 1995
6. 1960 through 1993
7. unknown
8. 1988 through 1998

Numerous other former employees were also informally interviewed. Employees whom were informally interviewed were not asked to provide previous employment dates.

28. *Have you contacted any of the present and past local farmers for history questioning?*

Yes See response to the question from Carol Dobrikin; July 27, 1999.

29. *I am requesting that you contact those cattle grazing farmers for questioning to find out more history on the project that could have been missed.*

I would like to refer you to what an eye opener it was, when that one former employee (that can't be located now) came to Chino Hills and pointed out so many other toxic sites that Aerojet wasn't aware of. Contact must be made with as many eyewitness account as possible.

Farmers that ran their cattle on the site need to be contacted to find out what they saw during the long history of Aerojet. Many of the farmers were in the area since the Aerojet plant's conception.

All direct sources of information available were researched. The farmer on site had no direct participation in Facility operations and was not allowed in the facility boundaries during operation. Therefore, he was not determined to be a source of first-hand information

30. *What was burned exactly up at the Aerojet site?*

As described in Section 4.2 of the RFI Report, waste explosives and propellants were burned at the site while the OB/OD unit was still active (i.e. prior to 1993).

The most specific information on Facility disposal operations is summarized on Table 2-1 in the Closure Plan for the OB/OD units. Additional information on the estimated volumes of waste explosives/propellants generated at the Facility was included in Aerojet's March 6, 1997 response to Ms. Morton. A copy of Table 3-1 and the table in the March 6, 1997 letter is included as Attachment F.

31. *What was burned in the open area?*

Please see the response to question 30.

32. *What was burned in the two incinerators on site over the whole course of 41 years?*

The two incinerators in the OB/OD area were built in 1975 and 1977. Fuzes and other munitions were destroyed in the popping oven and explosive/contaminated materials including paper cartons, air filters, rags and gloves were burned in the trash incinerator. Please see the response to question #30.

33. *Why was Aerojet given a continuance to burn their waste on site from 1989 till 1992, when it was illegal to burn waste in the State of California?*

Aerojet was authorized under interim status to operate the OB/OD unit. In 1989, Aerojet discontinued use of the trash incinerator and popping oven, but continued to detonate ordnance in the ground (buried several feet underground) in the Ranch Steppes area and conduct open burns in the burn pans. DTSC is not aware of any state regulations that made it illegal to burn waste in California, when the facility had authorization under a hazardous waste permit or interim status.

34. *I would also like to you to be very specific about what was burned from 1991 till 1995?*

Please see the response to question 30.

35. *Did any burning go up at Aerojet from 1992 to Present (May 1999)*

Since the closure of the OB/OD units in 1992, no waste materials were burned at the Facility. Several detonations of unexploded ordnance have occurred to remove hazards from onsite ordnance. A fire was set in Building 008 by the Chino Valley Fire Department as part of an arson training exercise in late 1997. No hazardous waste was involved; therefore DTSC did not have jurisdiction in this matter. At the request of DTSC, Aerojet tested the soil around the building for dioxins after the training exercise was completed. No dioxin above levels considered safe for human health were detected.

36. *Is Aerojet planning to do any burning on site with respect to any future clean-up or any other reason?*

No. Burning is not a part of future clean up at the Facility.

37. *Has Aerojet done any burning since 1991 as part of the clean-up process at the Chino Hills Aerojet site?*

See response to question No. 35.

38. *Were PCB's ever burned at the Chino Hills Aerojet site?*

No.

39. *Was Agent Orange ever detected at the site?*

No. Agent Orange was never present at the Facility.

40. *Was Agent Orange tested for on the site?*

No.

41. *Dioxin is a derivative of Agent Orange. Dioxin was found on site. Therefore, Agent Orange was on the site.*

At the 5/25/99 meeting between Aerojet and the public at Townsend Junior High, the question was raised to find the product linked to Dioxins on the site. No product that could be linked to the Dioxins was disclosed about the site. There was no original product that could be mentioned that would produce Dioxins.

The presence of dioxins on the site does not imply that Agent Orange is present. Dioxins may arise from a number of sources, and are found today throughout the environment as a result of environmental transport processes. Dioxins originate as by-products under certain process and reaction conditions involving the use of chlorine. Dioxins are known to form during the manufacture of some chlorinated compounds and pesticides, in the incineration of municipal and industrial wastes, and from the production of bleached wood pulp and paper. Wood combustion is another potential source of dioxins. At the present time, dioxins can be found throughout the environment in small quantities, and at locations far away from the processes that originally produced them. This spreading of low concentrations of dioxins can be attributed to various transport processes induced by humans or in nature.

42. *I demand that there be a wide spread test for Agent Orange and Napalm compounds at the site. Surface water, soil, and ground water.*

Aerojet records do not indicate the presence of Agent Orange or Napalm at the site.

43. *I would like to request 20+ past personnel from the Navy be contacted that were up at Aerojet during their existence. They need to be included in the discovery process. They are contributors to the contamination and need to be contacted as to how much contamination they have done up there.*

See response to questions Nos. 18, 19, 20 and 22.

44. *When McLaren and Hart use the term sweep of an area, what equipment are they using to do the sweep?*

Ordnance sweeps were conducted in accordance with U.S. Army Corp of Engineers (USACE) guidelines. The two main types of equipment used include the Schonstedt GA52Cx metal detector and the Geometrics G858G Cesium Magnetometer. Both instruments detect the presence of metal objects (iron-containing) in the ground, although the sensitivities of the instruments and method of use differ. The determining factors for selection of one instrument type over the other is presence of background items such as fences which interfere with the performance of the detection equipment, the type of ordnance suspected to be present in soil, and the number of items expected to be present in soil.

45. *Has Aerojet done a Geiger counter sweep of the whole property?*

Geiger sweeps were part of the DHS's decommissioning and decontamination (D&D) investigation and were not subject to DTSC oversight. Geiger counter sweeps were conducted in areas of the Facility that may contain DU as described in the D&D workplan submitted to and approved by DHS. The DHS, as part of its confirmation D&D efforts, routinely conducts Geiger counter sweeps. However, DTSC has now included uranium as a constituent of concern in the Corrective Action based on toxicity. DTSC will be evaluating the data collected by Aerojet and DHS to date to determine if all areas of the site including buffer areas have been adequately tested for uranium. Please see the response to General Comment 4 for further information.

46. *If the EPA was called in, how much of the facility did the EPA Sweep with a Geiger counter?*

It is assumed that the reference is to USEPA. Records do not indicate any use of Geiger counters when EPA investigated the site. EPA looked only at non-DU issues. Geiger counters were used by DHS.

47. *I would like to request the whole Aerojet site in its entirety to be swept with a high power Geiger counter.*

The site has been investigated in accordance with a workplan approved by DHS. The DHS will conduct its own confirmation investigation as a part of the certification of the DU removal by the independent consultant Rogers and Associates. You may wish to contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360 for further information. Please also see the response to question 45.

48. *I would also like to request that all of the buffer zones be swept with a Geiger counter.*

Please see the response to question 47.

49. *I would also like to request that the current sweeping technique that was pointed out on a map in green at the 5/07/99 public meeting, be done over the entire project and the entire buffer zone areas. (Meaning a sweep done on the entire sites of Catellus, Harvest, Wang and any other buffer property.)*

The focus of the ordnance sweeping investigation is to identify and remove ordnance from all areas of the Facility and the surrounding buffer zones that could potentially contain ordnance. Ordnance sweeps began in the primary areas of known impact and extended outwards until an area free of ordnance was defined. Sweeps then continued an additional 100 feet to verify the completeness of the investigation. Sweeps were also conducted in secondary areas (areas other than test ranges or disposal sites) where ordnance could exist.

DTSC is continuing to evaluate the detection and removal activities for UXO at the facility. Additional ordnance sweeps/ordnance investigation may be required by DTSC as a result of our review of the Ordnance Sweep Reports submitted by McLaren Hart or as determined by McLaren/Hart based on present ordnance sweep efforts. Please see Section II of this Response to Comments for more information.

50. *What threat could the potential landslide problems pose on the clean up process and the future citizens?*

Soils types and conditions in the Chino and Puente Hills are subject to natural landslides; thus, numerous historical slides can be found throughout the region. The areas to be remediated are situated in locations with stable conditions. The recent landslide in the southern portion of the Facility did not affect any aspects of the Corrective Measures and does not pose a risk to onsite workers or residents during the cleanup process. Please see the memo prepared by Paul Carpenter, DTSC geologist, for further information regarding landslides. This memo is included as Attachment D of this Response to Comments.

51. *I read the original Jay Kim report, and would like to know why Jay Kim's environmental assessment report shows more toxic areas than McLaren and Hart?*

Jay Kim's firm determined there were a lot more AOCs (Areas of Concern) than did McLaren & Hart.

The following areas listed in the Table of Contents of the Jaykim Report titled "Excerpts from Draft Property Assessment of Aerojet Ordnance Chino Facility" dated July 30, 1991 are included in the January 1999 RFI Report and February 1999 RFI Addendum Report:

Area 1 – included as AOC #10, metal forming area, in the RFI investigation

Area 2 – included as part of AOC #12, Arena Test Area, in the RFI investigation

Area 6 – included as SWMU #2, former Landfill, in the RFI investigation

Area 9 – included as SWMU #1 in the RFI investigation

Area 1C – included as AOC #6 in the RFI investigation

Area 7 & 7B – included as AOC #9 in the RFI investigation

Culvert southwest of Ranch Steppes – included as SWMU #3 (Ranch Well) in the RFI investigation

Spring south of building 16 – included as area 7 & 7B seepage spring in the RFI investigation

Building 035 – included as part of SWMU #10A in the RFI investigation

Area 20 – included as part of AOC #6

Aerojet is being required to perform additional work (confirmation sampling) at Building 16 drains and sumps, building 43, and Area 5. Area 5 is not a burn site as reported in the Jaykim report, rather, it is a former mortar and rocket warhead testing area. The Sand Screen Area will be included as part of DTSC's evaluation of uranium levels at the site (Please see the response to General Comment 4).

The Ranch Steppes and OB pits are included as part of the Closure of the OB/OD area. The Closure Plan for this area was public noticed in 1993 and approved by DTSC in December 1993.

52. *I would like to know why it took 2 years to answer my question that I submitted to the DTSC in 1997? I did not receive answers until April 1999.*

Aerojet and McLaren/Hart representatives met with Ms. Morton and other local residents at her house on January 6, 1997. Christine Brown, DTSC project manager, was present in the audience. The questions were verbally addressed at that time. McLaren/Hart provided a written response to DTSC by letter dated March 6, 1997. DTSC apologizes for our oversight in relaying written responses to your questions.

53. *I would like to know the time frame, it will take McLaren & Hart to complete the rest of the clean-up process at Aerojet, once the comment period is over and the DTSC gives them the go to finish the cleanup procedures they have been doing for 3 years.*

The Corrective Measures are expected to take several months following DTSC's approval of the project. Removal of the concrete culverts will take place first. Following that activity, excavation of RDX-contaminated soil at the former Redwater Pond and other locations will occur. Following the excavation of the RDX contaminated soil, both the excavation of CS (tear gas) containing material, including excavation of the landfill, and screening of soil to remove UXO and/or ordnance fragments will occur simultaneously. Detonation of UXO, if needed, will occur following the completion of the soil screening activity. Grading of the landfill area and Area 1C will occur after the screening and removal of UXO from soil and excavation of the CS (tear gas) containing material. Weather conditions may result in the completion of the work taking longer than anticipated. The community will be notified in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) of the time frame during which trucks carrying contaminated soil will be traveling and of the days on which detonations will occur.

54. *I would like information on a TAG? What is it? How do you get one?*

Please see response to General Comment No. 5

55. *When was the Open Burn/Open Detonation site closed?*

Page ES6, par. 5, line 3. Since 1967, various forms of waste explosive and propellants have been disposed of at the facility. Heterogeneous due to the extensive R&D Activities and a wide variety of governmental contracts that were awarded to Aerojet. There was so much waste in 1968 the open burn/open detonation area of the facility was constructed for the disposal of the EXPLOSIVES and propellant waste generated at the facility.

Page ES-8. It says on the report that only 7 samples were taken for Dioxins. I would like to request 100 samples be taken over the site of potential contaminated run off spots, old explosive ob/od sites (all of them), etc.

Since, it states that TCDD equivalents were found in a range from .72 to 5.3ppt, therefore, more testing needs to be done for TCDD compound. If the samples are finding contaminants, the rest of the site needs to be tested, especially ALL of the open burn/incinerator locations on the site. Even the previously closed OB/OD sites.

The OB/OD area is being cleaned up under the Closure Plan which was approved in 1993, and is a separate project from the Corrective Measures. The majority of the OB/OD area was cleaned up between 1994 and 1996 and a report documenting the work was submitted to DTSC in January 1997. The final cleanup work at this area is currently underway.

See the response to Question No. 41. Dioxin samples were collected as part of the Corrective Action at two locations, SWMU #1 and SWMU #9, where burning took place in the past. Sample results indicated that dioxin levels in SWMU #9 do not exceed health based cleanup levels. Sample results from one of two soil samples collected from inside the former burn pit in SWMU #1, were above health based levels, and therefore, cleanup is required and approximately 6 cubic yards of soil will be excavated and transported off site to a permitted hazardous waste facility for disposal. These are the only two locations (other than the OB/OD pits, popping oven and trash incinerator) where hazardous waste or constituents were reported to be burned at the site; therefore these two areas are the only two areas (other than at building 008, the location of a firefighting training exercise not involving hazardous waste/hazardous constituents) under Corrective Action where dioxin sampling is warranted. DTSC has reviewed the results of the site investigation as presented in the RFI Report and RFI Addendum Report and concludes that no further sampling for dioxins is warranted. Please see the responses to question nos. 16 and 41.

56. *I would also like to ask the question if EXPLOSIVES, TNT or Dynamite were ever used at the site?*

At the meeting of 5/25/99 with Aerojet and the Public at Townsend Junior High it was said that explosives were never on the site. I would like you to read my previous question in regards to ref Page ES6, par. 5, line 3. It states clearly that explosives were on the site and burned on the site. Also, one of my neighbors said that when she was in her teens, she would ride her horse up onto the buffer zones and parts of Aerojet's property. She saw boxes of TNT with warning labels on the boxes, "Warning Explosives!"

The Aerojet Chino Hills site is a former ordnance testing and assembly facility. As such, explosives were used extensively. The comment responded to during the meeting was not if explosives were used on the site but if dynamite was used. The answer presented in the meeting and repeated herein is that dynamite was not used at the site.

57. *What did Aerojet do with the explosives on site? Meaning, what types of operations did they perform on site with the explosives?*

High explosives were loaded into military-type ordnance. Ordnance items were tested in specially constructed test ranges at the Facility to verify compliance of the assembled item to military specifications.

58. *What exact explosives were up at the site?*

The primary high explosives used at the Facility included RDX and HMX, and an RDX/TNT mixture known as Cyclotol.

59. *How can you be sure that those old dynamite explosives weren't buried?*

We all know they sweat and become lethal.

Dynamite is not a military-type high explosive and is not usually associated with military ordnance applications. Private companies and individuals in construction, mining, excavation, and agriculture type industries commonly use dynamite. Dynamite was not used nor tested at the Facility.

60. *How does Aerojet plan to find any buried explosives, TNT, or dynamite on the site?*

As stated by Bruce A. Keyston, EOD, REA, CAC Senior Environmental specialist at the 5/25/99 meeting, they used to bury a lot of old ammunition during his career in the military. That was a common practice.

The ordnance sweep technology used by McLaren/Hart from 1996 through the present has detected two areas at the facility containing buried ordnance. These areas are Area 16 and Area 9. Both these areas will be cleaned up during the implementation of the Corrective Measures. By far, the area containing the most buried ordnance is the OB/OD area. This area is being cleaned up under the Closure Plan that was approved by DTSC in 1993. As stated in Section II of this Response to Comments, DTSC is continuing to evaluate the detection and removal activities for UXO at the facility, and will provide the public an opportunity to review the results of the reports and provide input to DTSC on the results prior to termination of Corrective Action. Sampling for TNT was conducted as part of the RFI investigation. This chemical is included as an analyte in EPA method 8330, the analytical method for explosive chemicals.

61. *How can you be sure those boxes of dynamite that my friend saw weren't buried?*

See response to Question No. 57.

62. *What happened during the big Explosion up at Aerojet when a man was killed on the site?*

Several accidents, including fatalities, have happened at the Facility during the 41+ years of operations. Most of the accidents resulted from the mishandling of explosives or failure to follow safety protocols and company procedures.

63. *What happened in the past, when there was such a big explosion that the inertia broke the windows in the homes below?*

In the late 1970s, Building 010 (AOC No. 8 in the RFI) was destroyed during an early morning explosion. The large quantity of the explosive compound Cyclotol/cyclotron (which contain primarily RDX) stored inside and around the building ignited. One security guard was slightly injured during the blast.

64. *Ref 6.1. I would like to request a testing on off-site soil samples for 1,3,5-TNB or whatever test detects those contaminants. The area that I want tested is the area that was informally named the east gully and the west gully.*

It was stated in the addendum report that the most harmful carcinogenic compound that a human could be exposed to at the site was 1,3,5,TNB.

The explosive compound 1,3,5-TNB is a standard analyte included in all EPA Method 8330 analysis. EPA Method 8330 is the standard EPA-approved analysis method used to detect explosive compounds. The east and west gullies were sampled for explosives by EPA Method 8330. No explosive compounds, including 1,3,5-TNB, were detected in these samples.

65. *What is the item that breaks down to make 1,3,5,TNB? Is it RDX?*

TNT breaks down into 1,3,5-TNB, among other compounds.

66. *Ref. Chapter 6. I would also like to request the Walking Beam Well and Sikkama Well are tested for 1,3,5-TNB, as well.*

Both the Walking Beam (also referred to as abandoned oil well) and the Sikkama Wells were tested for explosives. No explosive compounds, including 1,3,5-TNB, were detected in these samples.

67. *Ref. Chapter 6. I am requesting that the West gully and the East gully have off-site soil samplings done for perchlorate and dioxins.*

The West gully and East gully, located in drainage systems north of the Facility, were sampled for explosives, chemical agents, CS (tear gas), semivolatile organic compounds and metals. A groundwater well in this area, the Sikkama Well, was also sampled for the above mentioned compounds, including perchlorate. Analytical results indicate that no chemicals of concern used at the Facility have migrated off-site through the northern drainage systems. The sampling results for the Sikkama Well are reported in Section 3 of the RFI Addendum Report. The sampling results for the West and East gullies are reported in Section 6 of the RFI Addendum Report and are included as Attachment G of this Response to Comments.

68. *(Ref 7.1.1) Where are the sw-01-01-0.5 area and the sw-01-04-0.5 area that were tested? (As referenced on page 7.1, par 3, line 1 & 2).*

Ref 7.3.2. Alta Laboratories detected Dioxins.

Samples SW-01-01-0.5 and SW-01-04-0.5 were collected from SWMU No 1.

69. *(Ref 7.3.5) - Pace Laboratories - The ICS for Organophosphorous pesticide analysis in BATCH 709558 exceeded QC control limits. What is being done about this?*

The laboratory performed tests on samples that were spiked (i.e. the laboratory added known concentrations of the chemicals) with organophosphorous pesticides to check for accuracy of the laboratory procedures used to test for the pesticides. The results for Batch 709558 revealed that for two pesticides, methyl azinphos and chlorpyrifos, the amount found in the sample exceeded the upper control limit (i.e. the test performed revealed a greater concentration of pesticide than expected for the concentration of pesticide spiked into the sample) and that for one

other pesticide, dichlorvos, the amount found in the sample exceeded the lower control limit (i.e. the testing revealed a lower concentration of pesticide than expected for the concentration spiked into the sample). The consequence of these results is that sometimes the field sampling may have to be repeated.

At the Aerojet facility, organophosphorous pesticides were tested for at the facility because they were similar in chemical structure to the nerve gas agents. However, no organophosphorous pesticides were ever detected in any sample. In addition, subsequent testing with test methods specific to the nerve gas agents (testing performed by Battelle Laboratories) revealed no evidence of contamination with nerve agents.

70. *What is being done about the RDX found by this sampling?*

Area sw-13 had RDX tested at a level of 4,200.

Sample SW-07-13 was a water sample from the former Redwater Pond (SWMU No. 7). The water and residual RDX contamination will be removed as part of the Corrective Measures.

71. *What is being done about the high levels of Perchlorate found during these samples?*

Perchlorate was found at these high levels:

Wg-01-15 found to be 26.9.

SW-156-31 or wg-15-31 found to be 877.

As reported in Section 3.3 in the RFI Addendum Report, Human Health and Ecological Assessments of the perchlorate detected in the surface water sample WG-01-15 demonstrate that the occurrence of perchlorate in this concentration does not pose a risk to human health and/or the environment. The level of 877 ug/L was found in perched groundwater at 35-40 feet below ground surface, however, a complete exposure pathway between the contaminants and surface receptors (people, wildlife, plants) does not exist. DTSC will require Aerojet to evaluate the pumpability of this groundwater. Based on the results of this testing, DTSC may consider a modification to the Remedy requiring the facility to pump the groundwater. However, preliminary groundwater sampling data collected to date at both the Redwater Pond and the Upper A-12 Test Area indicate that the water may not be pumpable, due to the small amount of water present, and the amount of time it takes to collect sufficient water for a sample (3 hours in one instance).

If, at the termination of Corrective Action, groundwater above health based cleanup levels remains at the Facility, DTSC will require Aerojet to include provisions in the long term Operation and Maintenance Plan for groundwater monitoring and to ensure that future users of the site are not exposed to this water. Please see Section II for further information.

DTSC is also requiring additional testing of groundwater at the Upper A-12 Test Area, to verify that perchlorate is not migrating from this location.

Questions & Comments Submitted by Judy Morton, June 30, 1999

I am submitting my questions with detailed explanation. After my last submittal of overall concerns in 1996, I have realized that there needs to be a small overview attached with the questions. I hope this will help you in your process of providing answers to my questions promptly and accurately.

I would like to know why Aerojet has been permitted to clean up the site since 1995 till present, without the public being able to have a public comment period to comment on the clean up before they get started?

DTSC has overseen two separate investigations of the site. The first started in 1992 and included the remediation of the OB/OD units. The proposal to remediate the OB/OD area with a request for public comments was advertised to the public on May 5, 1993. Public comments were received and responded to by DTSC. Further, Aerojet conducted it's own public meeting on August 24, 1995 at the Ayala High School after publicly advertising in the local newspaper and hand delivering notices to the community near the site. The second investigation, which is the subject of the current public review process, is the remediation of SWMUs and AOCs in the Facility.

Other remedial operations, including the removal of depleted uranium (DU) based on radioactivity and petroleum-impacted soil from a former underground storage tank have also occurred at the Facility. These removals, however, were under the oversight of the Department of Health Services, Radiologic Health Branch (DHS) and the San Bernardino County Fire Department, Hazardous Materials Division, respectively. The removal of DU was conducted in accordance with a DHS approved workplan. Both removals were outside the jurisdiction of DTSC and may not be subject to the same regulatory requirements as the RFI under the corrective measure process. Therefore, there may not be the same level of public notification requirements associated with the removals.

The removal of perchlorate-impacted soil in 1998 from the Upper A-12 Test Area (SWMU No. 15) was performed as part of the site investigation being overseen by DTSC. The removal was conducted without prior public comments because the soil needed to be removed before the winter rain to prevent further migration of perchlorate to surface and subsurface water. Please see the response to your earlier question #19.

2 *I thought the public had a right to comment first and then the clean up would begin. Could you please discuss the procedures that must be followed when the DTSC takes over a site and the time line of those procedures.*

The site investigation process is described in general in the response to General Comment 1. The last paragraph described public involvement in the process. As a general rule, public comments are solicited before the remedy or clean up is implemented. The exception to this rule is when DTSC determines that an interim or stabilization measure is required to protect human health or the environment prior to implementation of the final remedy. Time constraints under these actions may preclude a formal public comment period and response to comments prior to implementation of the interim or stabilization measures. However, DTSC makes every effort to provide adequate notification to the community with respect to the projects that we oversee. We regret that we did not have better information on the community's concerns at the time. Otherwise, we could have provided better notification to the community regarding the removal of the perchlorate-impacted soil.

With respect to the current Corrective Measures project, the public comment period began on April 13, 1999 and was originally scheduled to end after 45 days on May 28, 1999. However, due to public comments and requests from the City of Chino Hills Council members, the comment period was extended to June 30, 1999. Since then, DTSC has carefully considered the public's comments and has prepared responses to the comments. After DTSC approves the Corrective Measures, the cleanup will take place.

3. *I would also like to know the procedures for "clean-up" with respect to the EPA-Radiological branch. Are they supposed to clean up the area without telling the public? I understand it is your jurisdiction to find out the information for the public and answer their questions. Please explain EPA's clean-up procedures to me with regards to the EPA-Radiological branch clean up at the Aerojet site.*

The following information has been provided by the Department of Health Services, Radiologic Health Branch.

The U.S. Nuclear Regulatory Commission (NRC) has the authority to license and regulate nuclear facilities and radioactive materials as mandated by the Atomic Energy Act of 1954, and amended by the Energy Reorganization Act of 1974. By agreement with NRC, the California Department of Health Services (DHS), Radiologic Health Branch (RHB) has assumed the authority to license and regulate radioactive materials within the State of California (California Health and Safety Code sections 115230-115235). The Aerojet facility at Chino Hills possesses a radioactive materials license from the State of California and is currently licensed to possess uranium-238 in the metal form, not to exceed 200 pounds.

The California Code of Regulations, Title 17, Section 30256(d) requires that under certain circumstances licensees submit a decommissioning plan to RHB for approval prior to the initiation of decommissioning activities. The facility submitted a decommissioning plan to RHB that became part of their license on June 16, 1992, authorizing Aerojet to proceed with cleaning up the facility. The majority of the cleanup of depleted uranium at the site occurred in 1992. The report was submitted in April 1993. A second decommissioning plan was submitted to RHB and included areas that had been in use during the 1992 cleanup. It became part of their license on May 31, 1996. The 1996 decommissioning plan sets forth soil criteria for cleanup of the entire facility consistent with the NRC's Branch Technical position identifying acceptably low concentrations of depleted uranium that can be left in place with no restrictions on future land use (35 pCi/gm soil, NRC, 1981 as published in the July 18, 1981 Federal Register) This means that the soil concentrations remaining at the site will be less than the concentrations currently deemed acceptable without imposing restrictions on future land use

The California Code of Regulations, Title 17, section 30256(h) further requires that once decommissioning is completed the licensee is required to perform a final status survey and submit the documentation demonstrating that the premises are suitable for release for unrestricted use. A confirmatory survey is performed by RHB staff for the purpose of verifying the status of the facility and further to allow for the making of a determination of whether the facility has been cleaned up to RHB's satisfaction. Based on a review of the documentation submitted by the licensee and the findings of the confirmatory survey, the facility may be released and the license terminated

With respect to comments regarding public notification, DHS is not required by the Radiation Control Law (Health and Safety Code section 114960 et seq.) or the associated regulations to make public notification or obtain public comment. As a state agency, DHS complies with requests by the public for documents relating to laws it administers as required by the Public Records Act (Government Code section 6250 et seq.).

4. *Why was the EPA clean up allowed with out a comment period before hand?*

Please see the response to question 3.

5. *Why was Aerojet performing clean up at night?*

During the last 3 years of the clean-up process up at Aerojet, there are eye witness accounts of heavy equipment being moved at night, truck loads of toxic waste being moved at night, burning being done at night and big strobe lights being lit at night to aid their clean-up process.

DTSC did not authorize any night-time activities. In speaking with Aerojet or McLaren/Hart, they also stated that they did not authorize or supervise clean-up operations at the Facility during the night. However, service trucks or equipment drop-off/delivery relating to the oil field operations or cattle grazing on the Facility may account for the reported truck activities at night, and the sightings of lights at night. Please see Attachment H for additional information regarding these activities. Besides service and maintenance of equipment, remedial activities have not, and will not occur at night at this facility due to inherent dangers associated with the activities.

6. *There has been a dust cloud about 1:00 am that looms over Aerojet property and then dissipates by morning. Is this due to operations being done at night?*

DTSC has not authorized any activities that would produce a dust cloud on or around the Facility at night. In speaking with Aerojet and McLaren/Hart representatives, they also stated that they have not authorized or supervised excavation activities during the night at the Aerojet Facility. The origin of any dust cloud sighted at night is not due to remedial activities at the Facility or Aerojet operations.

7. *What was being done at Aerojet at night?*

See response to questions No. 5 and 6. Security guards monitor access to the Aerojet site which is patrolled 24-hours a day, 7 days a week. Site access is restricted to authorized personnel only. No night remediation activities were conducted at the Facility.

8. *What is currently being done at Aerojet at night?*

See response to questions No. 5, 6, and 7.

9. *What is currently being done at Aerojet even though the comment period had not been completed yet?*

Field activities related to closure of the OB/OD Area are currently being conducted. The Closure Plan for this area was approved in 1993. Confirmation ordnance sweeps of the area were completed the first week of August 2000, and the ordnance collected from these sweeps was detonated from August 9, 2000 through August 23, 2000 (11 working days). On August 22, 2000, RDX-contaminated soil was excavated and removed from the facility utilizing eight trucks.

Ordnance sweeps are also being conducted as part of the site investigation as part of Corrective Action. Detonation of ordnance collected from these sweeps (expected to be less than 100 pound net explosive weight) will be conducted as part of the Corrective Measures.

Activities other than site cleanup include site maintenance and security activities. Other operations conducted on and around the Facility that are not under Aerojet's control include pumping and hauling of crude oil and cattle grazing.

10. *During the week of 6/21/99 the neighbors closest to the site saw the Aerojet property lit up by flood lights at nightly (approximately 1:00 am) and a dust cloud that would hang over Aerojet property. Then in the morning the dust cloud would dissipate.*

Aerojet and DTSC are not aware of any dust cloud on the Facility at night. As stated in the response to question No. 7, guards monitor access to the site 24-hours a day. Facility visitor registration logs from June 20, 1999 through June 27, 1999 were reviewed. Other than the security personnel, the latest time that anyone was onsite was approximately 6:00 p.m.

11. *If you as the DTSC are unaware that Aerojet has been doing clean-up at night, I would like to make a request for someone from the DTSC take a trip to the Aerojet Chino Hills site at night. I would like them to take random visits at night. I would like to request that they alert no one to their coming. That they would take it upon themselves to follow-up on this matter. This needs to be addressed NOW. As of the*

week of June 21, 1999 there have been activity at Aerojet happening at night with the floodlights lit at night

See response to question No. 6. DTSC will continue to take appropriate measures to ensure that all activities performed at the Aerojet facility are in compliance with the applicable regulations. With substantiating evidence, DTSC may issue orders and penalties to violators of DTSC's regulations, including violations of DTSC's approved workplans.

12. *I would like to request that the ground water at Aerojet be tested for radioactivity.*

As mentioned in the response to General Comment 4, DTSC will be requiring Aerojet to conduct an evaluation of uranium levels in surface water and in subsurface water.

13. *I would like to request the surface water at Aerojet to be tested for radioactivity.*

See response to comment No. 12.

14. *I would like to request that the run off water at Aerojet be tested for radioactivity.*

See response to comment No. 12

15. *Also, I would like to know if there is a better method to handling the D.U. ammunition that they find at the site. Currently, as they find un-exploded D.U. ammunition they are detonating them at area 16 in a box canyon. I do not want any possible DU micron particles traveling to my house.*

DU-containing ammunition is never detonated. These projectiles were tested at the facility by firing them into sand or into concrete culverts on hillsides. DU projectiles do not contain high explosives (such as RDX or TNT), thus, they do not detonate. They may pyrolize (i.e. become incendiary) if fired into a hard target such as the side of a tank. When DU materials are disposed of, they are safely packed in enclosed containers and transported to an approved off-site landfill facility under the appropriate DHS and DOT guidelines.

16. *Is there a way to put the ammunition that is detonated in an enclosure that has a filter system hooked up? This would filter the air after the ammunition is detonated and then put the clean air back into the air. If there is a system like this, I request they use it at the Aerojet site. We do not want any more air contamination than there needs to be.*

Yes. Detonation chambers that fully enclose the detonation have been developed. Use of a detonation chamber does limit the generation of flying metal fragments, particulate emissions and noise. However, at the facility, the current detonation procedures typically involve controlled detonations of the ordnance under 3 to 4 feet of soil with a limited explosive charge of up to 10 pounds. Metal fragments and particulates remain in the ground and are not introduced into the air. Further, detonation is conducted at a location on the Facility where the steep canyon walls (eighty feet high) preclude the transport of any dust outside the immediate location. To further limit dust migration, detonation activities are not conducted during periods of high winds. The noise levels produced by detonations performed in this fashion are limited to a localized boom with minimal reverberation (noise is less than that generated by the blow-in-place detonations that took place at the facility during the fall of 1999). Therefore, there is no need to use the chamber for the detonations taking place during the implementation of the Corrective Measures. The area used for these detonations was contaminated with ordnance while the facility was operating and was used for detonation of ordnance from the OB/OD Closure operations. This area will be remediated as part of the Corrective Measures once the detonation of ordnance items resulting from the soil screening operations and ordnance sweeps is complete.

17. *I would like to request that any area that is supposed to be cleaned by sifting be done off site. I would like that dirt removed and sifted somewhere else. I do not want anymore air contamination than there needs to be. Also, any of the transportation needs to be done in completely sealed trucks, not tarps. Tarps can be ripped, can be detached, broken and are a very poor way to ensure the safety of the people that live on the streets that the trucks have to drive on.*

Screening (sifting) of soil for ordnance cannot be done off-site because unexploded ordnance (UXO) cannot be transported off site due to the potential for detonation during transport. This would endanger the public. The purpose of the Corrective Measures is to remediate UXO onsite where it can be safely handled. The soil does contain UXO or metal fragments from ordnance, typically steel. Metal fragments will not be spread through airborne forces due to their weight. Dust abatement measures including spraying soil with water and air monitoring, will be implemented. Soil screening activities will cease if dust concentrations exceed 10 mg/m³ and if wind speeds exceed 25 miles per hour. These precautions will diminish any threat of airborne contaminants leaving the site or entering the local community.

Please see Section II of this Response to Comments (pages 2-3) for information on transport of contaminated soil by trucks.

Questions and Comments of Kimberly Sloss June 24, 1999

I am writing in regards to the Aerojet clean up in Chino Hills. I am a new resident of Chino Hills and just recently heard about the Aerojet site. I demand an Environmental Impact Report be conducted! I truly believe that a negative declaration is not enough when dealing with the magnitude of pollutants on this site.

As you are well aware, Aerojet has been operating for decades with unknown chemicals, and know hazardous and radio active wastes with in a couple of miles from my home. If this were your home wouldn't you at least expect an EIR be done? Judy Morton stated, at the City meeting held June 7, 1999, that a church wanting to put in an extra parking lot is required to do an EIR. Surely a known polluter such as Aerojet should be required to as well. I was under the assumption that the Department of Toxic Substances Control was an agency working for the good of the people. Our Agency should insist on the most stringent, thorough investigation of the site, not the least. An EIR is clearly called for in this case.

The amount of material in regards to the site is enormous and I haven't been able to study it all. I am very interested in learning every thing there is to know about Aerojet and it's history in Chino Hills. The things I have learned lead me to believe this situation has been passed off to many different departments, consulting firms and representatives of Aerojet. This situation does not leave me feeling protected or informed. I was at the June 7th meeting. I found the representatives from Aerojet guarded at best. I did not get the feeling that they were willing to be open and honest. All I can do is write to you and stay informed. The Department of Toxic Substances Control is supposed to be my voice.

The Following is my list of questions about the clean-up.

1. *How can Aerojet not know what the classified chemicals are?*

The military, not Aerojet, determines what information needs to be classified, and whether or not to declassify such information. Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments for information regarding the testing of classified chemicals at the facility

2. *Some one should know.*

Please see the response to question #1.

3. *Did any one ask the technician with the top secret security clearance who spoke to the Chino Champion about Dragon Tooth what he knew about the classified chemicals?*

Yes. Mr. Ralph Herring was invited to the site by Aerojet and participated in discussion about past activities with other former employees. He provided as much information as he knew. However, most of it was second hand knowledge. None-the-less, everything that Mr. Herring and others reported was evaluated through the RFI. Mr. Herring was provided a copy of the RFI workplan for comment.

4. *In the Chino Champion article dated June 22-28, 1995 Missing Plastic Explosives Buried at Aerojet site? There is reference to Dragon Tooth. Have those explosives been found?*

The Dragon Tooth Mine Test Area was identified as SWMU No. 10A in the RFI. Ordnance sweeps were conducted in the test area and surrounding areas to locate and remove these items. A total of 4 Dragon Tooth Mines were located and removed from this area. None of the mines found contained explosives. Live Dragon Tooth Mines have not been found on the Facility.

5. *Has the entire site been searched for explosives of that kind?*

No. To date, approximately 380 acres out of the 800-acre site (not including the approximately 80 acre Open Burn/Open Detonation Area) have been swept for ordnance, and additional sweeps are currently being conducted. As stated in Section II, DTSC is continuing to evaluate the detection and removal activities for ordnance at the facility. We are in the process of developing residential performance standards for cleanup of UXO. We will provide an opportunity for the public to review the results of the ordnance removal activities and provide input to DTSC on the results of the ordnance investigation prior to termination of Corrective Action. The ordnance detection technology used at the site detects all types of ferrous metal-containing ordnance, including the Dragon Tooth Mine. Please see the response to the comment made by Ms. Judy Morton (questions #44 and 49) on pages 58-59 for further information on the ordnance sweep technology.

6. *The BLU49 fragment bomb residue that was just drained out into the fields. Has the entire site been tested for this residue?*

The explosive used in the BLU-49 bombs is primarily RDX. The chemical RDX is one of several compounds included in samples analyzed for explosives by EPA Method 8330. Over 300 soil and water samples were collected from various areas of the Facility and analyzed for explosives, including RDX.

7. *Has the water been tested for the same residue?*

Yes, please see response to Question No. 6 above

8. *What are the hazards of this residue?*

RDX is the primary chemical of concern identified in soils at the Facility. It was detected in 5 areas of the Facility at concentrations exceeding human health-based cleanup levels (HBCLs). HBCLs are calculated by assuming that the residents will live in the area of highest concentrations, consuming small quantities of the impacted soil daily for a period of 30 years. The concentrations of RDX detected in all 5 areas do not pose a threat to workers in the area or to the off-site community. The RDX-containing soil will be removed as a part of the corrective measures.

9. *How many contracts with the government did Aerojet have that were classified?*

All military contracts are classified to varying degrees. Only a few of the military contracts associated with the Facility were classified at a level (top secret or higher) that limited access to detailed information, including information to even Aerojet representatives.

10. *What efforts have been made to find former employees of the company who would know about the site?*

Appropriate efforts were made to identify and interview current and former employees with first-hand knowledge of Facility operations. Please see the response to comments made by Todd and Karen Miller on pages 47-48 and the response to comments made by Ms. Judy Morton (question nos. 23, 24 and 27) on pages 54-56 of this Response to Comments

11. *What were the environmental polices of the company during the years it was in operation?*

To evaluate Aerojet's operations for purposes of the site investigation, DTSC evaluated a variety of information sources, including information provided by the facility, interviews with former employees, and information in DTSC's files, to determine the locations where hazardous waste may have been released to the environment as a result of Aerojet's site operations. A comprehensive sampling program was initiated (RFI Workplan) to determine if any releases had occurred. The results of the RFI investigation and the Health Risk Assessment determined that ten areas of the facility needed to be cleaned up. Additionally, based on comments received during the public comment period, additional requirements have been added to the Corrective Measures, and Aerojet is being required to perform additional work. Please see Section II for further information.

12. *How much of the under ground water has been tested on the site?*

Please see the response to General Comment 7 for information regarding testing of groundwater at the site.

13. *What are the patterns of flow for the under ground water at the site?*

Shallow groundwater at the site exists as isolated, discontinuous patches that lie at the interface between bedrock and overlying soil, in small fractures or in sandy lenses. This water generally flows horizontally along the interface between the loose soil and bedrock. The water tends to flow southward following the topography of the land and collects in the lowest portion of the Facility, near Lake Aerohead and then flows along Soquel Canyon to the west/southwest past the landfill to the southwest exit of the facility. Please see the response to General Comment 7 and the memo by Paul Carpenter, DTSC geologist. The memo is included as Attachment D to this Response to Comments.

14. *Will the water that is contaminated under the redwood pond at 40 and 80 feet be drained or cleaned up?*

Water contaminated with explosive chemicals was detected beneath the Redwater Pond (SWMU No. 7) at depths of 35 and 58 feet. Water at the 35-foot depth will be removed along with the impacted soil contaminated with explosive chemicals. Aerojet will be required to evaluate the pumpability of the water at the 58 foot zone to determine whether or not this water can be removed. Based on the results of this testing, DTSC may consider a modification to the Remedy requiring the facility to pump the groundwater. However, preliminary groundwater sampling data collected to date at both the Redwater Pond and the Upper A-12 Test Area indicate that the water may not be pumpable, due to the small amount of water present, and the amount of time it takes to collect sufficient water for a sample (3 hours in one instance).

If, at the time of termination of Corrective Action, groundwater above health based cleanup levels remains at the Facility, DTSC will include provisions in the Long Term Operation and Maintenance Plan for groundwater monitoring over seasonal cycles to address migration issues, and provisions to prevent future users of the site from being exposed to the water. Please see Section II for further information.

15. *The contamination that got into that water at 40 and 80 feet did so with a layer of rock between them. How much water is under the site?*

Please see the response to General Comment 7 and the memo by Paul Carpenter, DTSC geologist, included as Attachment D, for further information.

16. *How much water has traveled from the site during the cleanup process?*

This question is assumed to refer to groundwater. No calculations of volume of water discharge from the Facility have been made. However, data from monitoring wells around the Redwater pond indicate that the contamination found in groundwater here has not migrated away from the source area.

17. *How much water has traveled from the site while it was in operation?*

See response to Question No. 16. No calculations of historic volume of water discharge from the Facility have been made.

18. *How many employees worked at the site?*

Approximately 250 employees worked at the Facility

19. *How many cases of workers comp have been filed with regards to illnesses from employees of Aerojet at Chino Hills?*

Worker's compensation claims are confidential documents and, under State law, are not releasable to the public

20. *What are the long-term effects of Depleted uranium to my 2-year old?*

The cleanup standards for uranium will be determined in the same manner that the standards for RDX, 1,3,5-trinitrobenzene, lead, dioxin and perchlorate were established; i.e. by a Health Risk Assessment. This process is described in more detail in the response to General Comment 6. As stated in the response to General Comment 4, present site conditions do not pose a risk to the off site community. As also stated, DTSC will evaluate the existing levels of uranium at the site and will not release the site for residential use unless these levels are safe for anyone who would live on the site in the future, including children.

21. *What are the long-term effects of depleted uranium to my 12-year old?*

See response to question No 20 above.

22. *What are the long-term effects of depleted uranium to me?*

See response to question No 20 above

23. *What are the long-term effects of depleted uranium to my cat?*

See response to question No 20 above.

24. *What are the long-term effects of depleted uranium to the employees of Aerojet?*

Per conversation between DTSC and Don Vanderkar of Aerojet, employees with potential exposure to DU were routinely monitored to assure that worker health was not affected.

25. *What's the worst toxic substances on the site ever?*

The most significant hazard present on the site is unexploded ordnance in the soil. Other chemicals that have been detected in soil above health based cleanup levels include RDX, 1,3,5-trinitrobenzene, lead (one location), dioxin (one location) and CS (tear gas) containing materials at two locations. RDX, HMX and perchlorate have been detected in surface water and groundwater. Please see the response to General Comment 6 for further information regarding these chemicals.

As described in the response to Comment 4, uranium levels currently existing at the site will be evaluated by DTSC. If the levels are not adequately protective of human health for future residential land use, Aerojet will be required to either perform additional cleanup and/or a deed restriction will be placed on the property.

26. *Has that worst toxic substances been cleaned up?*

The Corrective Measures have been proposed to cleanup chemical contamination and ordnance at the facility. Once DTSC approves the Corrective Measures, the cleanup will take place.

27. *How much of it was there?*

The contamination at the facility is limited to isolated areas and is not widespread.

RDX has been found at five locations, at the facility, including the former Redwater Pond, above human health based cleanup levels. All soil above the cleanup level for RDX will be removed from these areas as part of the Corrective Measures. Another chemical, 1,3,5-trinitrobenzene, a breakdown product of TNT, has been found in soil at one location, the location of the former Redwater Pond. All soil containing this chemical above the health based cleanup standards will be removed as well during as part of the Corrective Measures. Lead and dioxin above cleanup levels have been found in one location each on the site, and CS (tear gas)-containing material has been found at two locations on the site. All soil contamination above health based cleanup levels will be removed from the site as part of the Corrective Measures.

RDX, HMX and perchlorate have been found in surface water in several locations at the site. The Health Risk Assessment determined that levels of these chemicals in surface water pose no threat to human health or the environment.

RDX, HMX, and several other explosive chemicals have been found in groundwater at the former Redwater Pond. Perchlorate has been found in shallow groundwater at the Upper A-12 Test Area. At present, there is no complete exposure pathway for this water to impact humans or wildlife standing on the surface soil at the site, and hydrogeologic conditions beneath the site make it very unlikely that the contamination would migrate to deeper groundwater.

28. *Would you (Aerojet representatives or DTSC representatives) live on the property now?*

Appropriate corrective measures should be completed prior to the reuse and redevelopment of the property for residential purposes.

29. *Would you live on the property after it's cleaned up?*

Yes. The current cleanup levels for chemical contamination are to residential levels. In order to determine the cleanup levels, a rigorous analysis is performed by DTSC to ensure that the site does not pose a risk to human health and the environment. If the residential cleanup standard is not met, a deed restriction limiting future land use will be placed on the property. As mentioned in the Response to General Comment 4, DTSC is evaluating the current levels of uranium on the site (based on toxicity to the kidney) to determine if these levels are adequately protective of human health. DTSC is also developing residential performance standards for cleanup of UXO. As mentioned in Section II, we are currently reviewing the UXO cleanup. Prior to termination of Corrective Action, the public will have an opportunity to review the results of the ordnance cleanup activities and provide input to DTSC on the results prior to termination of Corrective Action at the Facility.

30. *What is the top priority of Aerojet regarding the clean up?*

The top priority is to comply with all applicable laws and regulations, administrative and engineering controls as specified in the Corrective Measures Workplan, and with the Conditions of Approval for the Corrective Measures, as the Corrective Measures are implemented.

31. *What effect does the cost of the clean up have on the quality of the clean up?*

The cleanup costs are evaluated as part of the remedy selection criteria. It may lead to the selection of one clean up method over another. However, the standard for the completion of the clean up is not affected.

32. *How much does Aerojet expect to sell the land for?*

DTSC has no information regarding this topic, as our laws and regulations focus solely on the cleanup project.

33. *How many tons of soil do you plan to remove from the site?*

As described in the Corrective Measures Workplan, approximately 3,714 cubic yards of impacted soil is anticipated to be removed from the Facility. Using a conversion factor of 1.3, this equals approximately 4,825 tons of soil.

34. *Why use the water from the Redwood pond for keeping the dust down?*

This water is being used for dust suppression purposes to minimize the amount of waste produced from cleanup activities. This water will only be used on RDX-contaminated soil at the Redwater Pond, not on clean soil.

35. *Is the reason for using the water from redwood pond to keep the dust down an effort to save money?*

Please see the response to Question 34

36. *Does Aerojet have any connection to Catellus?*

No

37. *Has the water on the site been tested for radioactivity?*

As mentioned in the response to General Comment 4, DTSC will be requiring Aerojet to conduct an evaluation of uranium in surface water and in subsurface water on the facility.

38. *Has the site been tested for radon gas?*

No. Radon gas is not generated as a product or byproduct through Aerojet processes used at the Facility. Radon gas is generated from uranium ore due to the presence of radium in the ore, but not from depleted uranium (DU), since little radium is present in DU.

39. *Does the fact that the soil and water on the site are so high in saline hamper the testing of the samples taken?*

Salinity levels are typical for soil types in the region. The saline conditions characteristic of soils in this region have occasionally resulted in higher chemical detection limits due to interference. However, the California-certified laboratories that conducted sample analysis during the RFI implemented EPA-approved analytical procedures to compensate for the naturally occurring salinity levels and reported sample results that are accurate.

40. *Should I be concerned about living so close to this site?*

No. RFI results indicated that present site conditions do not adversely impact anyone living near the Facility. Please see the response to comments made by Mr. Andre Hernandez on page 21 for further explanation.

41. *Should I get my children tested for cancer because of anything Aerojet has done in the past?*

The Cancer Surveillance program demonstrated that there were no increased cancer cases in children or adults in the Chino Hills area. Please see the response to General Comment No. 2.

42. *Who will be responsible for the public's safety and health from toxins at the site?*

It is the responsibility of DTSC as well as Aerojet to ensure that the community is not unnecessarily jeopardized from hazards associated with the operation of the facility.

43. *What are the floodlights used for at the site?*

There are no floodlights used at the site. A light for the guard shack turns on in the evenings and may sometimes be mistaken for a floodlight on foggy nights.

44. *Are cleanup operations done at night?*

No. Neither DTSC, Aerojet nor McLaren/Hart representatives authorized or supervised clean-up operations at the Facility during the night. Service trucks or equipment drop-off/delivery relating to the oil field operations or cattle grazing on the Facility may account for the reported truck activities at night, and the sighting of floodlights at night. Please see Attachment H for further information regarding these activities.

Remedial activities have not, and will not occur during the night at this facility. Remedial activities will be limited to daylight hours so that appropriate safety measures can be implemented completely to protect both workers and the community from adverse impacts that may otherwise occur.

45. *Are testing of the soils and water or air done at night?*

No. See response to comment number 44 above.

46. *Is removal of the contaminated materials done at night?*

No. See response to comment number 44 above.

47. *What precautions are taken to keep the contaminated soil out of other areas?*

The performance monitoring and quality control procedures described in the Corrective Measures Workplan include use of water to minimize dust generation, air monitoring of dust levels, stopping soil excavation activities when conditions are extremely windy, and decontamination of trucks by dry brushing as trucks leave the excavated area.

48. *Are tarps used to cover the soils used more than once?*

Yes. Please see the project description in Section II of this Response to Comments for more information on the transport of contaminated soil by tarped trucks.

49. *What kinds of wildlife live on the site?*

All wildlife commonly encountered in the Chino Hills area live on the site. Please refer to the Biological Survey included as Appendix B of the RFI Report.

50. *Are there any forms of wildlife that should be on the site no longer there?*

No. Past Facility operations have not impacted local wildlife.

51. *Will the residents be informed when the trucks are passing by?*

The public will be given advance notice via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) of the time frame during which soil at the facility will be excavated and transported off site by truck.

52. *What has been burned on the site?*

Explosive and propellant wastes were burned at the facility in the past. A list has been included as Attachment F.

53. *Is burning of toxic substances the best way to remove them from the site?*

The Corrective Measures do not include onsite burning or incineration of wastes.

54. *Do these substances now go into the air after they are burnt?*

See response to comment number 53.

55. *Is the best possible way of dealing with any of the toxic substance being used with all of them?*

Yes. The corrective measures were evaluated using the following criteria:

- ▶ Short and long-term effectiveness,
- ▶ Reduction of toxicity, mobility, and/or volume,
- ▶ Long-term reliability, and
- ▶ Implementability.

Based on the above criteria, and with the addition of the Conditions of Approval, the Corrective Measures are appropriate. The long term operation and maintenance requirements described in the Conditions of Approval will ensure that the remedy remains appropriate.

56. *Is test range 1C considered the biggest area of contamination with regards to the soil?*

Test Range 1C contains soil stockpiles containing unexploded ordnance. However, the largest area of chemically contaminate soil is at the former Redwater Pond, which contains approximately 3000 cubic yards of soil contaminated with RDX and 1,3,5-trinitrobenzene. This soil will be excavated and transported off site by truck to an appropriate off site facility.

57. *Why is ground water being directed away from the screening plant and soil stockpile area?*

Surface water (if present), not groundwater, would be directed away from the screening plant and soil stockpile area to prevent erosion of this stockpiled soil.

58. *Will the minor grading required to change the drainage effect the contamination in any way?*

Once all remedial activities have been conducted at Area 1C and the landfill has been excavated, grading will be performed at Area 1C and at the former landfill (SWMU #2). Therefore, the grading operations do not involve contaminated soil. The grading will be done per City permit requirements to minimize erosion of compacted materials.

59. *What happens to the water that drains on or by this screening area and stockpile of DU contaminated soil before the clean up begins?*

As reported in the response to Question No 57, surface water, if present, would be directed around the screening plant and stockpile areas. Since this surface water would be directed around the area in which the cleanup operations would take place, it will be allowed to drain naturally down slope into the natural drainage leading from the OB/OD area toward the southwest corner of the facility into the Landfill Creek. This creek eventually flows into Soquel Canyon Creek.

60. *Is this drain off tested for radioactivity?*

This surface water will not be tested for radioactivity because it will not come into contact with stockpiled soil in Area 1C, as stated above.

61. *Is this drain off tested for radon?*

No Radon is not a chemical of concern at Aerojet for the reasons stated in the response to Question 38.

62. *Has any of the site been tested for radon?*

No. Please see the response to Question 38.

63. *Has Aerojet violated any environmental laws at this Chino Hills site?*

DTSC does not have any information indicating that Aerojet violated any environmental laws.

64. *Did Aerojet's operations violate environmental laws before these laws were in effect?*

A facility cannot violate a law prior to its adoption. Based on DTSC's records, Aerojet operated legally within the laws governing its business while these laws were in effect.

65. *How much of the water from the runoff of the site has been tested for all the toxic substances?*

No. Surface water at the site was tested for explosive chemicals (including RDX and HMX) and perchlorate. There is no need to test surface water for chemical agents, semivolatile organic compounds, lead or dioxins since these chemicals are not found in significant amounts at the facility. Please see the response to General Comment 7 for additional information regarding the testing of surface water at the facility. As mentioned in the response to General Comment 4, DTSC will require Aerojet to evaluate the levels of uranium in surface water and groundwater at the facility.

66. *What were the results of these tests?*

Please see response to Question No. 65.

67. *How far off the site has ground water and underground water been tested if at all?*

Please see the response to General Comment 7 for information regarding the testing of groundwater at the facility.

68. *What tests have been conducted directly off the site on ground water that is not our drinking water?*

Please see the response to question number 67.

69. *What are the results of these tests?*

Please see the response to question number 67.

70. *How long has the DU been sitting on the site?*

Depleted uranium projectiles have been tested at the facility since the early 1970's.

71. *What range does the radioactivity of the site have?*

The cleanup level established by DHS for uranium in soil based on radioactivity is 35 pCi/gm soil. The term pCi stands for picocurie, a measure of the amount of radioactivity remaining in the soil. This cleanup level is considered to be acceptable for unrestricted future use of the site. For further questions on radioactivity or the cleanup under the jurisdiction of DHS, you may wish to contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360.

72. *Perchlorate was scattered from other areas on the site during previous clean up operations. Knowing this fact, have all areas not just the known AOCs been tested for all possible contaminates?*

No. The perchlorate contamination at the facility resulted from facility operations involving testing of rocket motors in Upper A-12 test area. This contamination has migrated south in one surface water drainage that eventually joins the landfill creek at the southwest corner of the facility. Please see Figure 3-1 in the RFI Addendum Report for further information. The statement concerning the truck traffic area and the truck tire tracks as the potential source of perchlorate is related to the very low concentrations of perchlorate detected in the stream bed surface water near the center of the Facility and near the soil excavation area (Upper A-12 Test Area). This is the only occurrence of perchlorate in surface water that was attributed to the removal of perchlorate-impacted soil at the Facility. Furthermore, this occurrence of perchlorate due to the soil excavation does not significantly impact the surrounding environment or the nearby community. This is demonstrated from perchlorate not being detected in any groundwater well, on or offsite, or in any soil offsite. The other possible source of perchlorate in surface water is the landfill, which may be the source of perchlorate levels in the landfill creek. The health risk assessment demonstrated that the levels of perchlorate in the landfill creek do not pose a significant risk to wildlife or human health.

73. *Have all possible waters been tested for all the possible toxic substances on the site?*

No. Surface and groundwater were tested for explosive chemicals and perchlorate since these are the primary chemicals of concern that would migrate to surface water or ground water. As stated in the response to General Comment 4, DTSC will be requiring Aerojet to evaluate surface water and subsurface water for the presence of uranium.

74. *What are the long-term effects of the classified chemicals on the health of my family?*

See response to General Comment No. 6. Also, see the response to question #77 below. No chemical agent tested for has been detected in either the soil or water at the site. Therefore, your family would have no possibility to be affected by chemical agents at this time or during the implementation of the Corrective Measures.

75. *Will Aerojet continue to search for information about these classified chemicals until the information is found?*

Please see the response to your question #1 above and the response to comments made by Raymond and Heidi Kerr regarding testing of classified chemicals at the facility.

76. *What methods of searching are being used to find this information about the classified chemicals?*

See response to question #75

77. *Is any person presently employed for Aerojet who has the government security clearance needed to find out about these classified chemicals?*

For privacy reasons, information regarding persons at Aerojet who may hold government security clearances cannot be revealed. Please see the response to your question #1 above and the response to comments made by Raymond and Heidi Kerr on page 22 regarding testing of classified chemicals at the facility.

78. *In what years were these classified chemicals tested or other wise in uses at the site?*

The classified chemicals were tested from the mid 1960's through the late 1970's.

79. *Were these chemicals ever put into production or other wise used in any other operations at another facility other than Chino Hills?*

Aerojet never produced these chemicals. The Federal government provided them in small quantity for testing purposes in Aerojet laboratories only.

80. *Has anyone from Aerojet ever paid a bribe with regards to the site in all it's years of operation?*

No such transactions are known to Aerojet.

81. *Does the Department that handled the DU cleanup follow the same guidelines as other agency's with regards to its standards of clean and safe.*

Please see the response to the comment made by Ms. Judy Morton (question no. 3) on pages 65- 66 of this Response to Comments. You may also wish to speak with the DHS project manager, Mr. Jeff Wong, at (510) 540-2360.

82. *What should I be most concerned about with regards to my family's health and safety at this site?*

The results of the Health Risk Assessment demonstrated that there are no health risks to the off site community from present site conditions. Until the Corrective Measures are complete, trespassers may run the risk of exposure to chemically contaminated soil and UXO.

83. *What should I be most concerned about with regards to my family's health and safety during the cleanup?*

Administrative and engineering controls will be implemented during the clean up process in order to protect the public and site workers from possible chemical hazards and physical operations. These controls are described in Section II of this Response to Comments. DTSC believes these controls are sufficiently protective such that there is no perceivable adverse risk to your family.

84. *Will Aerojet do the most it can to clean up the site regardless of the cost?*

Aerojet has already spent a considerable sum of money to clean up the site and will do whatever is necessary and practical to ensure that past Facility operations do not impact current or future occupants on the site.

85. *Will Aerojet do the most it can to clean up the site above and beyond what it is required to do by law?*

Aerojet has exceeded legal requirements in much of the work performed to date. Aerojet and DTSC are committed to complete the remedial measures so as to protect human health and the environment.

86. *Does Aerojet know of any harm it has done to any person or animal because of its operations on the Chino Hills site since it's opening till the present day?*

Aerojet employees working at the site have been injured in the past during industrial accidents. However, there is no known health related injuries associated with anyone outside the Facility boundaries.

87. *What harm and to whom?*

Employee records cannot be released under California State law.

88. *Does Aerojet know of any potential harm it has done to any person or animal because of its operations on the Chino Hills site since it's opening till the present day?*

See response to question No. 86.

89. *What harm and to whom?*

See response to question No 87.

Please inform me of any and all operations at the site that is a possible health risk to my family from this clean up operation.

Please see the response to question 83.

Please inform me of any and all precautions I can take to protect my family from harm from this site and it's clean up.

The cleanup operations were designed to be implemented without any impact to local residents. There is no need for your family to take any special precautions.

Questions and Comments Submitted by Suzanne E. Steinseifer, May 26, 1999

My name is Suzanne E. Steinseifer.... I have been a resident of Chino Hills since 1985. I am very concerned about the past chemical testing and current clean-up proposal for the Aerojet site. I attended your public meeting and the Aerojet meeting on May 25, 1999. I have been conducting some research on the chemicals that were found and in need of being removed from the site. I researched the chemical Perchlorate and found that it is a contributor to thyroid disease and cancer through water and airborne contact. In December of 1997 I was operated on for a cold nodule tumor attached to my thyroid. There is no family history of thyroid disease or this type of tumor. I will be taking thyroid supplements for the rest of my life. At the Aerojet meeting I spoke with several residents and found numerous cases of cancer, graves disease (thyroid disease), leukemia, Hodgkin's disease and the number women experiencing miscarriages has been significant in my neighborhood. I want to encourage you to conduct a health survey of the long term neighborhood residents and analyze your proposed clean up proposal given that airborne contact may expose the Chino Hills residents to toxic chemicals resulting

in severe health problems. We have been exposed to these chemicals and this needs to be considered, evaluated, and remedied.

The response to this comment is included in the response to the comment below.

Questions and Comments Submitted by Suzanne E. Steinseifer, June 4, 1999

My name is Suzanne E. Steinseifer ... I have been a resident of Chino Hills since 1985. I am very concerned about the past chemical testing and current clean-up proposal for the Aerojet site. I attended your public meeting and the Aerojet meeting on May 25, 1999. I have been conducting some research on the chemicals that were found and in need of being removed from the site. I researched the chemical Perchlorate and found that it is a contributor to thyroid disease and cancer through water and airborne contact. In December of 1997, I was operated on for a cold nodule tumor attached to my thyroid. There is no family history of thyroid disease or this type of tumor. I will be taking thyroid supplements for the rest of my life. At the Aerojet meeting I spoke with several residents and found numerous cases of cancer, graves disease (thyroid disease), leukemia, Hodgkin's disease and the number women experiencing miscarriages has been significant in my neighborhood. I want to encourage you to conduct a health assessment of the residents that were occupying this area while Aerojet was in operation. I urge you to analyze the proposed clean up plan given that airborne contact may expose the Chino Hills residents to toxic chemicals resulting in severe health problems. We have been exposed to these chemicals and this needs to be considered, evaluated, and remedied.

DTSC takes the health concerns of this community very seriously. We have reviewed all workplans, reports, and the health risk assessment carefully. We have recommended additional field work or information in many instances as a result of our review. Based on the results of the RFI Report and the RFI Addendum Report, including the health risk assessment, DTSC has concluded that the present site conditions do not have an adverse impact to the nearby community. Please see the response to the comment made by Andre Hernandez on page 21 of this Response to Comments for further information.

Clean up will be performed in several areas within the facility boundaries. The Corrective Measures contain provisions for air monitoring and control of dust to minimize impacts to the health of the community from air emissions. Based on the review of the Corrective Measures Workplan and the additional engineering and administrative controls imposed by DTSC, we have concluded that the implementation of the cleanup measures at the site will not adversely impact or pose a health risk to the community. Please see the project description in Section II of this Response to Comments for further information on the Corrective Measures and the administrative and engineering controls that will be followed.

DTSC is aware of the community's concerns with respect to Aerojet's past operations. In the July through October 1999, the Desert Sierra Cancer Surveillance Program has evaluated the occurrences of cancer in the community and did not find any evidence of increased cancer. Please see response to General Comment 2.

For additional information on perchlorate, please see the response to General Comment 6.

I also demand that an environmental impact report be conducted given that the site is being considered and cleaned up for future home development. It is vital that the current residents know the environmental impact and the future residents know the hazards prior to their home purchase. I would also like to know who is responsible should it be discovered that due to exposure to the known chemicals the residents close to the Aerojet site are experiencing abnormal numbers of people with cancers, thyroid disease, respiratory problems, and miscarriage? This needs to be evaluated prior to the start of the cleanup of the Aerojet site. I do not want to be exposed any further to airborne particles.

I would like to have a response from your office as soon as possible.

Please see the response to General Comment 3 for an explanation of the CEQA process as it relates to the Corrective Measures. The Initial Study and Negative Declaration that were prepared for this project evaluated the potential adverse environmental effects relating to the Corrective Measures, not future development plans. The future development of the site is a separate project implemented by the City of Chino Hills and will require a separate environmental analysis.

As mentioned in the response to General Comment 2, Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center has evaluated the occurrence of cancer in the Chino Hills area. The study concluded that there was no evidence of an increased cancer rate in the Chino Hills area. You may wish to contact Dr. Morgan directly if you have additional questions. His phone number is 909-799-6181. Evaluation of the possible health effects to the community from past Aerojet operations is outside of DTSC's jurisdiction and is not part of the Corrective Measures.

Questions and Comments Submitted by Mary Catherine Unrein June 16, 1999

Please have an Environmental Impact Report done the clean up at Aerojet in Chino Hills. Why is that not done already? The 1992 Preliminary Assessment of Aerojet by the Environmental Protection Agency shows major problems. Why has the DTSC not required this when they knew the problems? Dr. Amiri has been involved in CERCLA and Aerojet was put on that list because of the EPA Report of 1992 and why not a EIR on the clean up?

The Preliminary Assessment was conducted to provide background information to determine if additional action is necessary for the site. This document is not used as the basis for determining whether or not an EIR is needed.

Questions and Comments Submitted by Mary Unrein June 17, 1999

Why are they using water from toxic pond to use as dust control in the same place? According to papers at Chino Hills library the water from Red Water Pond contaminated is used for dust control. Why are we not having a Environmental Impact Report on the clean up?

This water is being used for dust suppression purposes to minimize the amount of waste produced from cleanup activities. This water will only be used on RDX-contaminated soil at the Redwater Pond, not on clean soil.

Please see the response to General Comment 3 for the discussion on an Environmental Impact Report and the Corrective Measures.

Questions and Comments Submitted by Mary Unrein June 20, 1999

When Uranium decays in the ground radon gas is a by-product. Has that been tested for?

No. The site contains depleted uranium, not uranium ore. Depleted uranium does decay to radium; however, it will take approximately one million years for the depleted uranium to decay in order to produce significant quantities of radium are present. Therefore, there is no need to test for radon.

In the 1992 EPA Report shows so many problems on this site why is it so hard to get an Environmental Impact Report on this clean up?

Please see the response to General Comment 3 for the discussion on an Environmental Impact Report and the Corrective Measures.

Questions and Comments Submitted by Glenn VanBarriger June 25, 1999

This letter is in regards to the Aerojet site in Chino Hills, California. I request an Environmental Impact Report be done with regards to the clean-up.

I was at the City Council meeting in June. I didn't feel that Aerojet answered the questions about the toxic substances very well. There is a lot about the cleanup and their methods of obtaining information about the operations on the site that were unclear. A company with a history of polluting, such as Aerojet, should be required to go the most stringent means necessary. I am very concerned about the effects the site has on my family's health. I am very concerned about the methods that are being used to clean up the site. Aerojet has demonstrated that it will only comply with the letter of the law and not what is morally right. Very serious toxic substances are on that site. This matter needs to be handled with the up most responsibility and respect for human and environmental health.

The volumes of information available at the library are technical and legal in nature. The burden of sifting through it is enormous and overwhelming for any individual. Aerojet should inform the public in layman's terms that the hazards are and how this will effect the community. I find it difficult to know what questions to ask.

What is the safety hazards on the site?

The results of the Health Risk Assessment demonstrated that there are no health risks to the off site community from present site conditions. On site personnel may be exposed to chemically contaminated soil and unexploded ordnance if site safety precautions are not followed. For further information, please see section 7 of the Corrective Measures Workplan, a copy of which is available for review at the Chino Hills Library.

When the Corrective Measures are implemented, several precautions will be taken to prevent risks to the community. These include ambient air monitoring, and ceasing activities if dust levels exceed 10 ug/m^3 , using water as a dust suppressing measure, and selecting a truck route that does not travel past schools and other locations with sensitive receptors. The truck route was published in the Initial Study and is included as Attachment I. Please see the project description in Section II of this Response to Comments for further information.

What does Aerojet plan to do with the site after cleaning it?

DTSC understands that the site will be redeveloped. However, the redevelopment plans are not part of this Corrective Action project. As stated in the Conditions of Approval for Corrective Measures, DTSC will require long term operation and maintenance requirements to ensure ongoing protection of human health and the environment with respect to any remaining groundwater contamination at the facility and with respect to ordnance.

How much of the site has been cleaned already?

There are two other cleanup projects taking place at the site. Implementation of the Open Burn/Open Detonation area Closure Plan is nearly complete. This project is under the regulatory oversight of DTSC. It was public noticed

in 1993 and approved by DTSC in December 1993. The second project, cleanup of depleted uranium based on radioactivity, is under the regulatory oversight of the Department of Health Services, Radiological Health Branch. Please see the response to comments provided by Ms. Judy Morton (question #3) on pages 65-66 for further information regarding the status of this cleanup. You may also wish to contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360 for further information.

The project for which this public comment period was held is the Corrective Measures under the regulatory oversight of DTSC. These measures have not yet been implemented and will not be implemented until the final decision has been made, including the responses to these comments.

Will the entire site be inspected thoroughly after it has been cleaned to make sure it is clean?

When the Corrective Measures have been completed, Aerojet will submit a Corrective Measures Completion Report to DTSC for review. DTSC will review the report, including the sampling data, and then either require further field work or propose a final decision for Corrective Action at the facility. DTSC will also collect split samples during confirmation sampling for verification of sampling results. A site inspection after the clean up would not provide adequate documentation that the Corrective Measures had been completed. Instead, site visits by DTSC personnel during the clean up activities, review of the sampling data, documentation of off site disposal of contaminated soil, and project progress reports provided by the facility will provide more comprehensive information on the Corrective Measures.

What dangers are there to the public and my family in cleaning the site instead of leaving the mess on the site?

DTSC is mandated to protect public health and the environment. Leaving the site in its present condition poses a risk to on site personnel if safety precautions are not followed, and poses a risk to trespassers. If the site is cleaned up, this risk is significantly reduced. Therefore, DTSC believes that the most protective approach to human health and the environment is to clean up the site. Public health and safety will be protected during the implementation of the Corrective Measures. Please see the response to your first question and the project description provided in Section II of this Response to Comments for further information.

What are the long term effects of the wastes on the site?

The proposed cleanup levels for chemical contamination are to residential levels. In order to determine the cleanup levels, a rigorous analysis is performed by DTSC to ensure that the site does not pose a risk to human health and the environment. If the residential cleanup standard is not met, a deed restriction limiting future land use will be placed on the property. As mentioned in the Response to General Comment 4, DTSC is evaluating the current levels of uranium on the site (based on toxicity to the kidney) to determine if these levels are adequately protective of human health. DTSC is also developing residential performance standards for cleanup of UXO.

Because present day ordnance detection methods cannot guarantee that all ordnance items have been removed from an area, DTSC is requiring Aerojet to submit a Long Term Operation and Maintenance Plan to ensure ongoing protection of human health and the environment with respect to ordnance. If, at the time of termination of Corrective Action, groundwater above health based cleanup levels remains at the Facility, DTSC will include provisions in this plan for groundwater monitoring over seasonal cycles to address migration issues, and provisions to prevent future users of the site from being exposed to the water. The public will have an opportunity to review the provisions of this plan in more detail and provide input to DTSC prior to termination of Corrective Action. Please see Section II and the Conditions of Approval for Corrective Measures, a copy of which is included in Attachment B to this Response to Comments.

Who was in charge of the site during the classified chemical tests?

For privacy reasons, this person's name cannot be released.

Is this person still with Aerojet?

No. This person has retired.

Is this person involved with the clean up process?

Yes. This person was present in the formal interviews and continues to provide information through informal conversations.

Why have so many different companies and agencies been involved with the site?

Different agencies oversee different activities or practices under their authority as provided for by law. For example, the Regional Water Quality Control Board's (RWQCB) mandate is to protect water resources, DTSC's mandate is the protection of human health and the environment from hazardous substances and wastes, DHS's Radiological Health Branch is mandated to oversee the use and handling of radioactive materials, etc. In turn, different consulting companies provide expertise in specific activities or practices, for example, McLaren/Hart conducted the site investigation in accordance with DTSC guidelines, and Rogers and Associates provided consultative services on the depleted uranium cleanup in accordance with DHS guidelines.

How many different people has this cleanup been managed by?

Ms. Christine Brown has been the project manager for the Corrective Measures at DTSC since the development of the Consent Agreement in 1994 and Mr. Don Vanderkar of Aerojet has been the facility contact since 1993.

What kinds of policies were used at Aerojet with regards to storing information about the operations at the site?

Records were kept and stored in accordance to standard industry practices at the time.

When did Aerojet (if at all) comply with environmental law?

DTSC does not have any information indicating that Aerojet violated any environmental laws.

Was it common practice before environmental laws were in effect to dump toxic chemicals onto the land in whatever fashion they wished?

This question is answered specific to Facility operations. Waste products generated at the site were handled by specific practices such as OB/OD, evaporation ponds, burn pits, etc. Although these were standard practices used throughout the ordnance assembly community at that time, they did result in impacts to the environment. The RFI was focused on identifying and characterizing these areas and, if necessary, remediating impacted materials and areas.

Was any other company, corporation or organization of any kind involved in using the site for manufacturing assembly, testing, storing or any other operation at the site?

Military organizations were commonly present during testing operations

Were any files intentionally disposed of in any manner regarding the site?

Files were kept for a specific time period. After that period, records that were no longer considered valuable or were out-of-date were destroyed, as is common practice in all industries.

How much money did Aerojet make from contracts with the government during the years the site was open?

DTSC does not have justification or need to request this information from the facility. This information would not aid in making the site investigation more thorough or in identifying strategies needed to protect community health during the implementation of the Corrective Measures.

Do present contracts with the government have any impact on the cleanup now?

No. The facility has been closed since December 1995.

Does Aerojet receive special treatment from DTSC because it has or had contracts with the government?

No. DTSC requires all contaminated sites to be cleaned up in accordance with the state laws and regulations.

What precautions can I take to eliminate the risk to my family while the clean up is going on?

The cleanup operations were designed to be implemented without any impact or harm to local residents and the environment. There is no need for your family to take any special precautions.

When will the dirt be hauled away?

The public will be notified in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) regarding the time for transport of contaminated dirt off site by truck.

How long will the clean up process take?

The cleanup process is anticipated to take three to four months to complete, although the exact duration may depend on weather or other factors. Please see response to question No. 53 from Judy Morton on page 60 of this Response to Comments.

Will I be informed when the trucks move the dirt?

Please see response to question No. 21.

Is the air monitored for DU and other toxic substances during the cleanup?

Air monitoring will be conducted for dust during the excavation of chemically contaminated soil, CS (tear gas) containing material and during the soil screening process. Work will cease if dust levels exceed 10 mg/m³ or if wind speed exceeds 25 miles per hour. Since toxic substances including explosive chemicals, CS (tear gas) and uranium adhere to the dust, air monitoring for dust and ceasing work if dust levels become excessive will provide adequate protection of worker health as well as the off site community health. Please see Section II of this Response to comments, the Conditions of Approval for Corrective Measures which is included in Attachment B of this Response to Comments, and the Corrective Measures Workplan for further information.

What sort of precautions will personnel take during the cleanup?

In addition to air monitoring and work practices to minimize generation of dust, and the presence of trained UXO specialists to deal with project activities involving UXO, site safety meetings will be conducted daily to discuss the specific precautions needed for that day. Other safety precautions taken at the site include procedures to deal with physical hazards due to the presence of excavation and transportation equipment, and measures to deal with brush fires including the presence of a pumper fire truck, fire extinguishers and procedures for contacting Chino Valley Fire in the event that a brushfire started on the property.

Will they be wearing devices that filter the air they breath?

As reported in the site Health and Safety Plan, site personnel working around CS (tear gas) containing material will be required to wear full-face respirators. Individuals on other portions of the facility not working around the CS material will not need to wear respirators. All other activities are anticipated to not require respirators. However, air monitoring will be conducted and, if necessary, personnel will be prepared to use respiratory protection equipment if conditions warrant.

Should my family be wearing these devices now or at any time during the cleanup?

Current and future conditions at the site do not warrant use of air purifying equipment or any other special precautions to be taken by the general community. Implementation of the corrective measures is designed to protect both the long-term and short-term health of all residents and also the onsite workers. There is no need for you or your family to take any special precautions at any time during implementation of the Corrective Measures. Please see the project description provided at the beginning of this Response to Comments for further description of the Corrective Measures and the engineering and administrative controls to be used.

Does the windy nature of this area have an impact on how the cleanup will be conducted?

Yes. If the wind velocity reaches 25 miles per hour, activities involving soil excavation and screening will be stopped.

Does the windy nature of this area have an impact on my possible contamination level from the site before, during, or after the cleanup?

No. See response to question 28.

How much water under the ground has been tested?

Please see the response to General Comment 7 for information regarding testing of underground water.

What toxic substances has the water been tested for?

Please see the response to question 30.

How long does Perchlorate stay in the water, or soil if not found by the cleanup activities?

The longevity of perchlorate, or any other chemical in the environment depends on many factors, including the concentration of the chemicals, the characteristics of the soil, media the chemical is found in, natural biological activities, etc. Perchlorate does not degrade easily in either water or soil, and can persist for years.

In which way is Perchlorate most dangerous? (Water, soil, air)

Perchlorate ion, in its water-soluble form is probably the most harmful. However, the concentrations of perchlorate currently detected in both the soil and surface water at the Facility do not pose a risk to human health or ecological receptors. Groundwater at 35 feet below ground surface in the Upper A-12 Test Area contains perchlorate levels of 887 ug/L; however, a complete exposure pathway does not exist at present. DTSC will be requiring Aerojet to perform additional work to determine if this localized groundwater is migrating. Please see Section II of this Response to Comments for further information.

Why will test range IC be buried in approximately 50 to 80 feet of clean fill material?

The Corrective Measures do not include covering test range IC or other test ranges with clean fill.

Will this site be cleaned up of all toxic substances before it is buried?

Unexploded ordnance is present in the soil at Area 1C. The soil will be screened to remove UXO as part of the Corrective Measures.

Why does it need to be buried?

See response to question No. 34.

Will the clean fill material be brought in from another site?

See response to question No. 34.

Will all water used as dust control be brought in from another site?

Most of the water to be used as dust control will be obtained from a water truck or from the City's fire hydrant located on site. The contaminated water from the 35 foot zone at the former Redwater Pond will be used for dust suppression purposes on RDX-contaminated soil at the Redwater Pond. This water is being used for dust suppression purposes to minimize the amount of waste produced from cleanup activities. This water will only be used on contaminated soil at the Redwater Pond only, not on clean soil.

What will happen to the water that is used for dust control?

Water from the water truck or from the City's fire hydrant used in areas where the soil is not contaminated with hazardous chemicals will remain in the soil or soak into the ground. Water used on chemically contaminated soil will remain with the soil (no free running water will be generated). The soil will be handled as remediation-generated waste.

Is this water now contaminated?

Water from the city fire hydrant or the water truck is not contaminated. The RDX-contaminated water is. The application of water to a contaminated area is for dust suppression. There will not be any wastewater generated as a result of the application.

How will this water be treated?

The RDX-impacted water will either remain on the RDX-contaminated soil (which will be hauled off site) or be managed as remediation-generated waste (if not used for dust suppression) and be disposed of off site in an appropriate wastewater treatment facility.

What precautions will be taken about the dust that the water doesn't control?

The use of water for dust control is only one of several measures that will be implemented to minimize to spread of impacted soil. Air Monitoring will also be conducted, and if dust levels exceed 10 mg/m^3 , corrective measure operations will cease. In addition, corrective measures operations will not take place if wind speeds exceed 25 mph.

Is this dust that gets away a hazard to my family in any way?

No. Please see response to question Nos. 29 and 42, and the response to the comment provided by Mr. Andre Hernandez on page 21 of this Response to Comments.

Will the trucks be vacuumed before leaving the site?

No. The trucks will be decontaminated by dry brushing prior to the truck leaving the site.

Please inform me of any and all operations that may potentially endanger my family's short term and long term health regarding the cleanup. Please inform me of the precautions I can take to keep my family safe from this toxic nightmare!

DTSC does not believe that implementation of the Corrective Measures will endanger your family. However, DTSC will inform the public in advance, via an advertisement in the Chino Hills Champion, regarding the scheduled days for detonations of unexploded ordnance and of the days when the trucks haul chemically contaminated soil off site.

Questions and Comments Submitted by Jonathan Parfrey, Physicians for Social Responsibility, Nancy Wells, and Claire Schlotterbeck; June 30, 1999

Thank you for the opportunity to comment on the proposed Negative Declaration, Initial California Environmental Quality Act (CEQA) Study, and Statement of Basis for proposed Remedial Measures at the Aerojet Chino Hills Facility. We ask that the Department of Toxic Substances Control (DTSC) place the following comments in the administrative record. Additionally, we request that Physicians for Social Responsibility, Los Angeles (PSR-LA) receive timely notice of all administrative action regarding the Chino Hills facility.

Our organization, comprised of 2400 members residing in San Bernardino, Riverside, Orange, and Los Angeles Counties, strongly oppose the approval of the Negative Declaration as well as the Proposed Remedial Measures at Aerojet-Chino Hills. The CEQA initial study, and the Aerojet/McLaren-Hart studies, fail to provide reasonable assurance of adequate protection of the public health and environment.

A failure in the permit process has been inadequate notification of the public on the scope and potential health threats from the Chino Hills site, as well as a failure to provide scientific, technical and public health background material that is comprehensible and informs the public.

The Proposed Remedial Measures Public Notice Package (EPA ID NO. CAD981457302) states that a public notice was listed in the Chino Hills Champion on Thursday, April 8, 1999. The statement further reads that a radio announcement is not required for this public notice. We believe that one notice placed in one small-circulation newspaper is hardly sufficient. Many individuals in the Chino Hills area do not read the Champion, but instead rely for news on the Los Angeles Times, San Bernardino Sun, Riverside Press-Telegram or Orange County Register. These publications carried neither stories nor notification of DTSC's solicitation for comments.

DTSC believes that the public notice was sufficient, especially given the large turnout of concerned individuals at the public hearing and the fact that DTSC provided an additional 30 days for public comments. In addition to notifications in the local paper, the public notice was mailed to over 4100 residents and business living around the Facility. Further, all key contacts listed in the mailing lists for public participation tasks and techniques (DTSC Exhibit 700-16) were notified and their comments included in this document. An additional opportunity for public input was provided by the public meeting held at the City of Chino Hills City Council chambers on June 7, 1999.

But more troubling is the fact that other communities potentially affected by contaminants from the Aerojet facility were not included in the public comment process. As the Aerojet facility is located on a hill, Aerojet's geologist Joe Bahde acknowledges that here are multiple drainages for surface water. Contaminants may not merely move in the direction of Chino Hills, but might also migrate in the direction of Carbon Canyon, Chino Hills State Park, and out into northern Orange County. Therefore, notification of Remedial Measures needs to be placed in the communities of Brea, Yorba Linda, Placentia, and Anaheim.

No contaminant has been found in surface water leaving the Facility at concentrations that pose a risk to human health or ecological receptors. Notification of the communities of Brea, Yorba Linda, Placentia, and Anaheim is not needed due to the fact that they are located a significant distance away from the site and therefore the site contamination does not have the potential to affect them. The public notice was placed in the Chino Hills Champion. The Chino Hills Champion covers the communities of Chino, Chino Hills and Ontario south of the 60 freeway to Grove Avenue. This newspaper was chosen because DTSC wanted to reach the community close to the site because this community has the greatest stake and interest in the Corrective Measures.

The situation in Chino Hills may concern various water districts. If perchlorate is found in water, a water district is required by law to immediately report its presence to county agencies. Have the following agencies asked by DTSC if their samples reveal perchlorate in their water supply: the Orange County Water District, San Bernardino Municipal Water District, Inland Empire Utilities Agency, Metropolitan Water District of Southern California, Western Municipal Water District, and the Water Replenishment District of Southern California? Just as importantly, have these agencies been asked to offer public comment on the Proposed Remedial Measures?

All investigations performed to date indicate that perchlorate contamination is limited to shallow groundwater at one location at the facility. Please see your later comment on page 92 for further explanation. Since it is unlikely perchlorate contamination in groundwater at the facility has migrated off site, notification of local water districts is not necessary. Perchlorate detected in a drinking water well in the City of Chino is not related to perchlorate detected at the Aerojet Chino Hills Facility.

Other important government agencies have also been curiously absent from participation. In the October 1998 Chino Hills State Park General Plan (Preliminary) no mention is made of the Aerojet Ordnance facility, or of possible contamination of the Carbon and Soquel Canyons. Have state park and the California Resources Agency, and its Secretary, Mary D. Nichols, received data regarding Aerojet's hazardous waste impacts on park lands?

The California Resources Agency, Department of Parks and Recreation, Los Lagos District in Perris, California was notified of the remedial measures and submitted questions and comments for response.

As reported in the October 1998 Chino Hills State Park General Plan, the Environmental Impact Report received letters from the following entities: California Department of Transportation, Districts 8 and 12; City of Brea; City of Yorba Linda; Chino Hills; Metropolitan Water District of Southern California; Hills for Everyone; Friends of Tecate Cypress; and the Wildlife Corridor Conservation Authority. Considering impacts on the Chino Hills State Park, DTSC should solicit letters from these interested agencies and municipalities.

Several of these organizations have commented on the remedial measures and responses to those comments are included herein.

The Boy Scout Council representing Firestone Camp, and community of Diamond Bar (Los Angeles County) may also be eligible for inclusion in the comment process. The CEQA document states that winds at the site are variable, page 15, therefore, during a Santa Ana wind condition, explosive charges, and some containing uranium oxide, may have drifted into Los Angeles County. Mitigation activities taking place during such wind conditions may also impact Los Angeles County residents.

No conditions have been observed or sampling results at the Facility that indicate hazardous or potentially hazardous materials have left the site and adversely affected the local community. Thus, notification of the entities mentioned above is not necessary.

Contaminants may indeed reach groundwater and aquifers. The CEQA study, page 19, characterizes the hydrology of Puente Hills as containing sharp folds or fault dissections. Seismic inconsistencies should mitigate towards prudence. But DTSC is taking a chance that contaminated water will not one day be used as potable water. This gamble is especially reckless given the presence of technical remedies to lessen the amount of perchlorate in groundwater.

All investigations performed to date indicate that the contamination is limited to the shallow, seasonal groundwater, and has not migrated downward. No samples collected from existing deep groundwater wells at the facility have contained any contaminants. Contrary to the statement, the structural geology of the Puente Hills and Chino Hills area does not pose a dramatic seismic instability risk that could facilitate migration of contaminants to deep groundwater; the folds are penetrative bedrock features, and no major active faulting is mapped near the facility. Please see the response to General Comment 7 and the memo prepared by Paul Carpenter, DTSC geologist, for further information. This memo is included as Attachment D to this Response to Comments. Please also see the response to comments made by Ms. Marjorie Mikels at the public hearing on pages 101-102.

If, at the time of termination of Corrective Action, groundwater above health based cleanup levels remains at the Facility, DTSC will require Aerojet to include provisions in the Long Term Operation and Maintenance Plan for groundwater monitoring over seasonal cycles to address migration issues, and to prevent future users of the site from being exposed to the water. The public will have an opportunity to review the provisions of this plan in more detail and provide input to DTSC prior to termination of Corrective Action.

DTSC documents frequently point to past medical benefits of perchlorate, (which have, incidentally, been widely discontinued.) But have residents been fully informed of perchlorates potential health dangers? That perchlorate is a new member of the EPA's contaminant candidate list? That perchlorate is an endocrine disruptor and may be damaging to reproduction and, even at exquisitely small levels, may affect the development of the fetus? That perchlorate can lead to hypothyroidism? That exposure to perchlorate may lead to a plastic anemia?

Have residents been informed that studies vindicating perchlorate in the Journal of Occupational and Environmental Medicine (April 1999 and May 1999) were authored by Steve H. Lamm, a medical consultant for America Pacific, the sole remaining perchlorate manufacturer in the United States?

Have citizens been aware of contamination produced by Aerojet at the Rancho Cordova and Azusa sites? Has the Chino Hills public been informed that Aerojet is cleaning-up perchlorate in Sacramento County, and currently operating a five million dollar perchlorate treatment facility?

Have residents been informed of the La Puente Valley County Water Districts ion exchange program cleaning-up Aerojet's Azusa-based perchlorate pollution? Have stakeholders been informed of other remediation technologies, such as reverse osmosis, ozone-peroxide/carbon, and anaerobic biochemical processes?

Twelve sites at Aerojet have been identified as requiring remediation. PSR-LA questions the decision to forego remediation in the other seventeen areas within the facility. We are concerned with the soil sampling, the decision on where to test, and the laboratory technique in finding the presence of perchlorate. Please answer this questions: of the 1,200 soil and water samples, how many were collected by parties other than the site owner, its hired engineers, DHS, or DTSC?

Information regarding the health effects of perchlorate is provided in the response to General Comment 6. The Health Risk Assessment has determined that there is no health threat to the off site community from the contamination presently on site, including perchlorate. DTSC is aware that perchlorate has been added to the CCL list.

The Corrective Measures are being implemented to clean up the contamination at Aerojet due to the past operations of the Aerojet Chino Hills Facility only. The nature of the site conditions and cleanup at the Rancho Cordova and Azusa sites, despite perchlorate being a contaminant at both sites, is extremely different from the conditions at the Chino Hills site. Therefore, the cleanup activities are site specific.

In response to public comments, DTSC is requiring Aerojet to evaluate of the pumpability of the contaminated groundwater at the location of the former Redwater Pond (58 foot zone) and at Upper A-12 Test Area. Based on the results of this testing, DTSC may consider a modification to the Remedy requiring the facility to pump the groundwater. However, preliminary groundwater sampling data collected to date at both the Redwater Pond and the Upper A-12 Test Area indicate that the water may not be pumpable, due to the small amount of water present, and the amount of time it takes to collect sufficient water for a sample (3 hours in one instance).

Ten locations at the facility require cleanup. Please see response to General Comment No. 1 for further information regarding the site investigation process implemented at the Aerojet Chino Hills Facility. Samples were collected by McLaren/Hart representatives at locations approved by DTSC and sampled for the appropriate chemical(s) of concern. Split samples were collected by DTSC representatives for additional confirmation at several of these locations.

There is a need for independent sampling at the facility where educated members of the community may determine which organization conducts the tests and determines location of sampling.

As mentioned in the response to General Comment No. 5, no financial or legal mechanism exists at this time for DTSC to provide money to communities for additional sampling under the RCRA Corrective Action program. Instead, DTSC has responded to community concerns expressed previously during the site investigation and has conducted additional sampling when specific concerns have been raised by the community and where there is scientific justification to do so. In addition, based on public comments, DTSC is requiring Aerojet to perform

additional work and has added conditions of approval to the Corrective Measures. Please see Section II of this Response to comments for further information.

Have testing protocols followed DHS protocols? EPA currently considers five parts per billion (ppb) as the infant and eighteen ppb as the adult advisory action level. Testing mechanisms have only met DHS standards to find perchlorate at four ppb. Have Aerojet laboratories used approved perchlorate laboratories? Have test selected at a sensitivity of for ppb?

Perchlorate analysis was performed by Weck Laboratories, a California-certified laboratories using EPA Method 300M. Weck is approved by DHS to conduct perchlorate analysis and has demonstrated water detection levels of 4 ug/l.

Also troubling are anecdotal reports of elevated numbers of rare childhood cancers and birth defects in the area. DTSC should contract with a neutral agency to conduct epidemiological studies on cancer and reproductive health outcomes in the region. The scope of the study, its methodology, and the agency that performs the research should be agreed-to by members of the affected community.

Recent independent reports by the Loma Linda Medical Center indicated that there is no elevated occurrence of childhood cancers in the Chino Hills area. Please see response to General Comment No. 2.

Regarding the depleted uranium (DU) situation at Aerojet Ordnance, did the Radiological Health Division of DHS attend the public May 13, 1999 meeting? Has DHS been at other community meetings, and accessible to the public to discuss their findings about DU at the site?

DHS representatives were at the public meeting but did not participate. Please see response to General Comment No. 4. For further information, please contact Mr. Jeff Wong of DHS, Radiologic Health Branch at (510) 540-2360.

Medical studies are currently divided over the impact of depleted uranium on human health. Studies from the Gulf War, regarding soldiers exposed to uranium oxide, the air-borne particulates which result from a depleted uranium oxide explosion, have been troubling. If inhaled, uranium oxide, an alpha-emitter, could cause cell damage leading to cancer. DU also poses a threat to the kidneys, where high concentrations could lead to organ failure. DTSC should relate the half-life of depleted uranium, 4.46 billion years, so people may better determine the extent of hazards at the site.

Please see response to General Comment No 4. Please see the response to comments made by Mary Unrein on page 83 for information regarding the radioactive decay characteristics of uranium.

The live ordnance clean-up has clearly been inadequate. As presented at the May 13th meeting, a community member found a hand grenade in April 1999. It was blown-up by the appropriate authorities. His son also found M-1 ammunition on a hillside and took possession of an ammo clip. He brought this clip to the hearing. 30.6 (thirty-odd six ammunition were found below Autumn Street in Chino Hills. Is the site perimeter truly secure? Might not ordnance have moved far off-site? Might not hikers enter the compound? Why were large areas to the west, south and southeast not swept?

DTSC is continuing to evaluate the detection and removal activities for UXO at the facility. Additional ordnance sweeps/ordnance investigation may be required by DTSC as a result of our review of the Ordnance Sweep Reports submitted by McLaren Hart or as determined by McLaren/Hart based on present ordnance sweep efforts. DTSC's proposed cleanup goal for ordnance contamination is future residential land use. DTSC is in the process of developing residential performance standards for cleanup of property contaminated with UXO. We will evaluate

the results of the ordnance sweep efforts in light of the performance standards. If the results our review reveal that the ordnance detection and removal activities do not meet our standards for future residential land use, Aerojet will have the option of performing additional ordnance removal activities or considering an alternate land use. The public will have an opportunity to review the final land use decision and the results of the ordnance sweep activities and provide input to DTSC prior to termination of Corrective Action.

During the May 25, 1999 meeting, it was stated that a grenade and some ammunition were reportedly found outside the Facility boundary. Aerojet representatives contacted the Sheriff's Department regarding the grenade. They reported that it was an inert grenade that can be purchased as a novelty item through several catalogs. Reportedly, the bomb disposal personnel respond to numerous calls each year from people finding these items. Grenades and 30.6 ammunition were not used or tested at the Facility.

At the May 13, 1999 community meeting, Mr. Senga stated that all questions from the meeting would be answered and subsequently posted in the Chino Hills Library. These responses were put out before the end of the extended comments time period. Why? When will the answers to these responses be posted?

This Response to Comments includes questions submitted at the public hearing held on May 13, 1999. DTSC provides the responses to all public comments received at the time we make our decision on the Corrective Measures. At that time, copies of the responses are mailed to all commenters, and a copy of the responses is placed in the Chino Hills Library.

Chino Hills homeowners and taxpayers stand to lose property value if their community is stigmatized as a polluted area. If homes are ultimately built on or near the facility, and materials migrate in such a way to produce morbid or fatal results, Aerojet should post a bond, as a potentially corrective measure to compensate homeowners and those exposed.

One of the benefits of cleaning up the site will be the elimination of any environmental "stigma" that could adversely affect property values or the reputation of the City of Chino.

Based on evidence provided in the RFI Report, the RFI Addendum Report and the Health Risk Assessment, DTSC believes that present site conditions do not pose an adverse significant environmental effects on the off site community and contaminants are not migrating off site in quantities that would significantly affect human health or the environment. Please see the response to comments made by Ms Marjorie Mikels on page 41 and by Mr. Andre Hernandez on page 21 of this Response to Comments.

Based on the results of the ordnance sweeps conducted to date, it is unlikely that ordnance from the facility has migrated off site. However, because present day ordnance detection methods cannot guarantee that all ordnance items have been removed from an area, DTSC is requiring Aerojet to submit a Long Term Operation and Maintenance Plan to ensure ongoing protection of human health and the environment with respect to ordnance. Please see Section II and Attachment B for additional information. The public will have an opportunity to review the results of the ordnance sweeping activities and the Long Term Operation and Maintenance Plan and provide input to DTSC prior to termination of Corrective Action at the facility.

In summary, DTSC's public participation was inadequate to the scope of the contamination and cleanup. DTSC failed to present alternatives to the public. DTSC did not offer an accurate and reasonable description of action as there was not an option of the contamination.

The analysis of alternatives was presented in the Statement of Facts that was public noticed along with the Corrective Measures.

We request that DTSC incorporate the comments and suggestions we have submitted, revise the project documents accordingly, and re-issue them as draft documents for public comment. We request that DTSC take no action on the proposed Negative Declaration until the CEQA Study and Statement of Basis has been re-issued and public comment on the new documents carefully considered.

DTSC has incorporated a number of the suggestions and comments made by the public. However, we believe that the Initial Study and Negative Declaration and Statement of Basis adequately support the Corrective Measures, and do not need to be recirculated. We also believe the Corrective Measures adequately address the contamination found at the facility. Therefore, we have approved the Corrective Measures, along with conditions for approval that incorporate community concerns. We also are requiring Aerojet to perform additional work to address issues raised in the comments, and will provide the public an opportunity to review the results of this additional work and provide input to DTSC prior to termination of Corrective Action at the Facility.

As contamination at the Aerojet site was extensive, its remediation therefore should, if done correctly, also be extensive. Therefore, PSR-LA strongly believes that DTSC must perform a complete and thorough Environmental Impact Statement at the site. We propose the CEQA Study and Statement of Basis must be revised.

Please see response to the above comment.

In closing, we request that DTSC provide a clear, understandable, and responsive point-by-point assessment of our comments. We must also state the PSR-LA reserves the right to pursue all legal means to insure the safety and health of the public impacted by the Proposed Measures for the Aerojet Ordnance - Chino Hills Facility.

Comment understood.

Questions and Comments Submitted by John D. Hunter, Chino Valley Unified School District; June 29, 1999

Recently the Chino Valley Unified School District received information related to the current process of cleaning up the Aerojet facility located in the Chino Hills. Certain concerns related to the potential effects of the project on school sites located within the general area have been received by a school board member. The Board of Education has directed staff members to review certain issues. Among these is the nature of the material being removed and how it being routed, what measures are in place to mitigate any potential danger to school sites (to include substance monitoring procedures) and how the individual school sites can best respond to inquiries from parents, etc.

The District is aware that a community meeting was conducted by the City of Chino Hills. We would ask that your agency place the District on the appropriate mailing list to receive all pertinent community related correspondence and/or notifications related to this project.

Based on the geographical location of the Aerojet facility the Chino Valley Unified School District has four school sites located within the general area. These are as follows:

Butterfield Ranch Elementary	6350 Mystic Canyon Dr., Chino Hills	91709
Oak Ridge Elementary	15452 Valle Vista Dr., Chino Hills	91709
Los Serranos Elementary	15650 Pipeline Ave., Chino Hills	91709
Robert Townsend Jr. High School	5359 Ilex Dr. Chino Hills	91709

The District is also aware that a study related to cancer rates in the area is being conducted. The District's Coordinator of Health Services will be reviewing this issue through contact with the appropriate agency.

Based on the nature of this project the District feel that the school sites and their respective students and staff can be best served by being aware of what is going on and prepared to deal with any related situations. We are again encouraging agencies to maintain an information flow to the Chino Valley Unified School District.

DTSC will keep the public regarding progress of the implementation of the Corrective Measures. In addition, DTSC will require Aerojet to notify the public in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) of the time frame during which trucks carrying contaminated soil will travel off site and during which UXO will be detonated. The truck route is included as attachment I of this Response to Comments and does not pass by any schools.

Questions and Comments Submitted by Kenneth E. Scott for Jason Marshall, Department of Conservation; May 12, 1999

Subject: Negative Declaration for the Aerojet Chino Hills Facility - Proposed Corrective Measures, San Bernardino County SCH #99041052

The Department of Conservation's Division of Oil, Gas, and Geothermal Resources (Division) has reviewed the above reference project. The Division supervises the drilling, maintenance, and plugging and abandonment of oil, gas, and geothermal wells in California.

We offer the following comments for your consideration.

The project site contains oil wells. However, the maps submitted with this document do not contain enough detail for us to verify the information on oil wells located within the project boundaries. Maps of sufficient detail and scale must be submitted to the Division's Cypress office to allow identification of wells of concern with respect to public safety and natural resources protection.

The only operating oil wells are located in the northeast corner of the Facility. No Corrective Measures are occurring near the oil wells. DTSC understands that you now have the maps you need.

In the meantime, it should be noted that if any plugged and abandoned or unrecorded wells are damaged or uncovered during excavation or grading, remedial plugging operations might be required. If such damage or discovery occurs, the Divisions Cypress office must be contacted to obtain information on the requirements for, and approval to perform, remedial operations.

It is highly unlikely that any plugged or abandoned oil well would be encountered during remedial efforts since the areas requiring remediation have already been identified. However, if such a well is encountered and damaged, the Division will be contacted.

Questions and Comments Submitted by Andrea Gullo, Department of Parks and Recreation; May 12, 1999

Per our phone conversation, this is written confirmation of a time extension until May 28th for comments regarding the above mentioned project. As a trustee agency of the California Environmental Quality Act and the agency responsible for the stewardship of Chino Hills State Park, the Department of Parks and Recreation is concerned that the health of the natural environment within CHSP may be affected by previous adjacent land uses if not properly remediated.

Specifically, we are concerned with the protection of sensitive species including but not limited to coastal sage scrub, gnatcatchers, and least Bell's vireo. We are also concerned with the health of affected blueline streams and receiving waters and all species found in those aquatic systems.

We plan to attend the public hearing scheduled for May 13th designed to educate the public about the project, and will be providing more complete comments within the new deadline time period. Thank you for your flexibility.

Please see the response provided to Gary Watts, Department of Parks and Recreation letter dated May 19, 1999.

Questions and Comments Submitted by Gary Watts, Department of Parks and Recreation; May 19, 1999

The California Department of Parks and Recreation (CDPR), Los Lagos District, appreciates the opportunity to comment on the above mentioned project. As a trustee agency of the California Environmental Quality Act (CEQA) and the agency responsible for the stewardship of Chino Hills State Park (CHSP), we are concerned that the health of the natural environment within CHSP may be affected by previous land uses near the Park if not properly remediated. The following comments to the negative declaration are provided for your consideration:

- ▶ *The negative declaration identified coastal sage scrub as being present on the subject property but did not recognize it as being a special-status species, which it is. Coastal sage scrub is a threatened southern California plant community, and this project has the potential to contribute to the overall cumulative loss of this habitat type. We recommend that the project proponent coordinate with the appropriate regulatory agencies regarding mitigation for any losses to coastal sage scrub habitat.*

The presence of coastal sage scrub habitat was evaluated in the Biological Survey conducted at the Facility. It is not anticipated that site remediation activities will significantly affect these areas or other sensitive habitats. Most areas being remediated are classified as developed and/or disturbed. In the past and as part of future remedial activities, the Department of Fish and Game will issue a "streambed alteration permit" prior to remediation that includes provisions to protect sensitive or protected species.

- ▶ *Federal protocol surveys for gnatcatchers and least Bell's vireo should be conducted to identify the presence of these sensitive species if remediation is to occur in or near their associated habitat types, coastal sage scrub and riparian areas. Both species are present within the Chino Hills. We recommend that applicable mitigation for impacts to these species be coordinated with the regulatory agencies.*

These species were included in the Biological Survey but were not found on or believed to be present on the Facility

- ▶ *If soil is to be imported on site for remediation efforts we ask that organic/top soil not be used as it can facilitate establishment of nonnative vegetation. Approximately \$20,000 a year is invested in exotic nonnative plant removal measures within CHSP, and many of the exotics are infestations from outside the Park.*

The use of imported soil is not anticipated during site remedial activities

- ▶ ***We request that CDPR, be notified directly if there is a fire or threat of fire on the subject site. Certain areas within CHSP contain sensitive and rare species which require specific attention. Our staff is well trained in fire management as well as attending to sensitive natural resources and visitor safety needs.***

DTSC will require Aerojet to notify CDPR in the event of a fire on their property once all other appropriate emergency response agency(s) have been alerted.

- ▶ ***Contaminated ground water from the subject property has the potential to adversely impact aquatic systems and the species they support. Waters running off of the site go into Soquel Creek and eventually in to CHSP. Since depleted uranium and toxic chemicals associated with explosives research and development were found in at least two wells and in surface waters on site, testing off-site is needed within CHSP. Living resources within CHSP could be affected if significant levels of these toxic substances are in surface or ground water resources. Appropriate mitigation needs to be incorporated in the environmental document.***

Surface water is contaminated with RDX, HMX and perchlorate in one surface drainage running south along the western portion of the facility. This drainage veers west when it reaches Lake Aerohead, runs past the Landfill (Landfill creek) and ultimately joins Soquel Canyon Creek at the southwest exit of the facility. The source of the RDX and HMX is believed to be the former Redwater Pond, and the source of the perchlorate is believed to be the Upper A-12 Test Area. A perchlorate level of 83.2 ug/L (no RDX or HMX was detected) was detected in Soquel Canyon Creek where it exits the facility to the southwest; however, testing 1.75 miles downstream revealed no contamination. The Health Risk Assessment has determined that the levels of RDX, HMX and perchlorate in surface water do not pose a risk to human health or the environment. Please see Section 3 of the RFI Addendum Report for further information.

- ▶ ***We request that restoration efforts involve replanting with local native species. Our staff is available to offer suggestions for appropriate vegetation types.***

The City of Chino Hills requires that a certain seed-mix be used during restoration efforts. If requested, a copy of that list can be submitted for your review.

- ▶ ***The CDPR is concerned with the threat of unexploded ordnances as stray test rounds could have entered CHSP. We request that offsite sweeps within CHSP be conducted to protect the safety of park visitors, as the North Ridge Trail is located near our common boundaries with Aerojet.***

Ordnance sweeps have been completed throughout much of the Facility and near the CHSP property line. During these sweeps, no UXO item has been found within 1,800 feet of the CHSP/Aerojet property line.

Thank you for your consideration. Once completed, please provide us with a copy of the Notice of Determination for the project including a response to our comments.

Questions and comments Submitted by Douglas La Belle, City of Chino Hills; June 29, 1999

Enclosed with this letter you will find an audio tape of the City's public forum held on Monday, June 7th at the City of Chino Hills Council Chambers on the Aerojet site cleanup process. I would request that the comments presented to the City at this public forum be included as comments pursuant to the Department's public comment process currently underway.

The comments and DTSC's responses have been included in Section VII of this Response to Comments as requested.

We sincerely appreciated the representatives from your Department being present at this forum to review the process, answer questions, and address comments by Council Members, residents, and interested parties regarding this effort. I would like to further request that any comments presented that are more appropriately addressed by other State agencies be forwarded to those agencies for evaluation and response.

The Department of Health Services, Environmental Investigations Branch (represented by the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center) has responded to community concerns regarding cancer (please see the response to General Comment 2). DTSC has discussed depleted uranium with the Department of Health Services, Radiologic Health Branch. Please see the response to General Comment 4.

I would also specifically request, on behalf of the City, that a hauling plan including routes, operating times, and dates be submitted to the City for review and conditioning. This routing and operational plan should be submitted to my attention. Again, on behalf of the Mayor, City Council, and staff I would like to thank you for your continuing efforts to provide information on the Aerojet cleanup effort as it progresses.

The truck route is included as Attachment I to this Response to Comments. The trucks carrying contaminated soil from the facility will be traveling east on Woodview Road to Pipeline, south on Pipeline to Chino Hills Drive, and east on Chino Hills Drive to the 71 freeway. The City of Chino Hills will be notified in advance regarding the days on which the trucks will travel.

Questions and Comments Submitted by Linda Grimes, Department of Transportation; May 3, 1999

Thank you for the opportunity to review the submitted documents dated 4-09-99 for the above referenced project and we request consideration of the following comments.

Please send a copy of the project Negative Declaration to this office as soon as it becomes available.

DTSC will provide you with a copy of the Negative Declaration.

VI. RESPONSES TO COMMENTS FROM THE PUBLIC HEARING

MARJORIE MIKELS: *Thank you so much for calling this meeting. Forty-five years Aerojet was exploding weapons and munitions. Many of them made in Oakridge, Tennessee. And they were manufacturing some things and they were testing bombs and land mines in Sleepy Hollow and in these canyons. And this depleted uranium that you are talking about cleaning up, this is a radioactive substance that will be radioactive for billions of years with the half-life of uranium. This -- these are weapons of mass destruction and chemical warfare that were manufactured here. And they have been dumping waste into unlined caustic ponds for all of this time. And the rains come and it washes these poisons, arsenic, nitrates, iodine radiation into the soil, and it gets into the air and into the ground water and it has shown up in the wells.*

Aerojet tested ordnance items assembled in their Chino Hills facility on Aerojet owned or leased property. No testing operations occurred outside the facility boundaries or near Sleepy Hollow. Aerojet did not test any items made in Oakridge Tennessee on the site and did not test, store, receive, or assemble nuclear weapons at the Chino Hills Facility. Enriched uranium or other highly radioactive materials used in nuclear weapons were never at the Facility. The depleted uranium used in the armor piercing projectiles is designated low level radioactive material and is not used in nuclear weapons. The depleted uranium tips were never manufactured at the facility; the pre-manufactured tips were assembled onto the main body of the projectile at the facility.

Soil with high pH was excavated from the two caustic ponds was excavated in the early 1980's under the regulatory oversight of the Santa Ana Regional Water Quality Control Board. Confirmation sampling performed at that time indicated that all the contaminated soil had been removed. Confirmation sampling conducted as a part of the RFI investigation revealed that concentrations of nickel were within background levels. Sampling results for semivolatile organic compounds and PCBs revealed that no contamination with these chemicals was present at the ponds. RDX was detected in one sample at a level of 0.32 mg/kg, well below the cleanup level of 3 mg/kg. Trace amounts of methylene chloride and phenol were reported in two separate samples; however, these chemicals are common laboratory contaminants and thus there is no reason to believe that materials containing these chemicals were disposed of in the ponds. These trace levels are well below levels considered hazardous to human health. Levels of arsenic at the facility have been demonstrated to be within background levels and not the result of hazardous waste operations. No materials that contain radioactive iodine have been used at the facility. As mentioned in Section III, surface water and groundwater will be tested for nitrates.

In fact, a couple of years ago, four wells were shut down because there was arsenic in there and terrible nitrate. And the City of Chino Hills had to buy water from the Upland area. And they were buying eleven million gallons of water and paying \$400,000 for that water that summer. And then they brought in all of this water exporting it from other places. And they are diluting the water in the wells so that they are at acceptable levels for drinking.

Geologic conditions at the site make it highly unlikely that the contaminants found in shallow groundwater will migrate to deeper groundwater away from the site. DTSC evaluated the sampling data from both on site and off site local wells and found no evidence that chemicals in groundwater beneath

the site have migrated beyond the immediate and localized area of impact. Please see the response to General Comment 7 and the memo prepared by Paul Carpenter, DTSC geologist. This memo is included as Attachment D to this Response to Comments.

Municipal wells supplying drinking water to the City of Chino Hills are located in the Chino Groundwater Basin, which is north and upgradient of the facility. Information provided by the City [of Chino Hills] engineer at the community meeting held in the City Council Chambers on June 7, 1999 indicated that all domestic wells are located east of Highway 71 and east of the Chino Fault. The City Engineer further pointed out that the Chino Fault is considered to be a substantial sub-surface barrier, separating the hills to the west (in which the facility is located) from the lowlands and water-bearing material to the east. As far as the potential for communication between the two areas, the City reported that any influence from the Aerojet site would be negligible due to the nature of the geological conditions and geographic relationship of the Facility to the City's water sources.

The municipal wells mentioned above are sampled regularly in accordance with laws and regulations to ensure the quality of the drinking water. The sampling and testing is normally performed by the water company/purveyor with the oversight from the Department of Health Services, Division of Drinking Water and Environmental Management. These results are usually provided in your water bills or can be obtained by contacting your local water purveyor. No perchlorate has been detected in the Chino Hills municipal wells to date.

And I'll bet you, all of you, when you bought your homes, were never told this. Because what happened is, that Jay Kim [s.i.c.] quote unquote "environmental engineering firm" got the contract to this site initially and investigated. And he got hundreds of thousands of dollars. He recommended they put houses over this site, and even though there were land mines there. And children in the past have been blown up where they build houses over land mines. Then they weren't even going to clean it up. He tested down two feet and he illegally used \$400,000 of that money to go into his campaign coffers, along with a lot of money from Korean corporations. And this stuff has never been brought before where a doctor or citizens in their town, who at great risk to themselves, and under great, great stress and strain, because these organizations have not been doing their job, did bring this to the attention of officials. Now, this same thing is happening all over our community now. Lockheed has poisoned the wells in the east valley. Kaiser Steel has horrible, horrible water because Department of Toxic Substances Control has never done anything. Jesse Huff, under Wilson, was a joke. His whole motto is "Cover up, don't clean up." Let's put a raceway over it.

Please see the response to your earlier comment on page 41 of this Response to Comments.

The accident that happened at the Tierra Santa community in the San Diego area in the early 1980s was indeed tragic. It was because of this incident that ordnance sweeping activities were reevaluated, modified, and rewritten to protect future residents/land users of the danger associated with UXO.

As mentioned in Section II of this Response to Comments, DTSC is continuing to evaluate the detection and removal activities for ordnance at the facility. Please see Section II for further information.

The results of the ordnance sweeps conducted at the OB/OD area are will also be reviewed prior to termination of Closure at this area. This Closure Project is a separate project from the Corrective Action.

No, no, it can't be five minutes yet.

The point is, Aerojet is one of those multi-billion dollar corporations. It has polluted the American River. It has polluted the Azusa area. It dumped waste at both Stringfellow Acid Pits and the area over in Azusa, and it's getting away with it. They make billions of dollars as a multi-national corporation and they are not being required to do these cleanups. We are. We are, the taxpayers, are having to pay for this. And you are talking about monitoring the wells. No. Xerox when they were dumping over there, they had to pump the water and they had to clean it up or haul it off and reinject, okay. It should be those corporations that are taken to task, not all of us people.

Both the Rancho Cordova (Sacramento) site and the Azusa site are being remediated under the USEPA Superfund program. The Superfund program stipulates that the parties responsible for contaminating the site pay for the costs of the cleanup. The Chino Hills site is being remediated under the State of California Corrective Action program. Aerojet is paying oversight costs for this cleanup as well. The cleanup of the Rancho Cordova and Azusa sites are not part of this project. For further information on the Rancho Cordova site, please contact the duty officer in the DTSC office in Sacramento at (916) 255-3617. For further information on the Azusa site, please contact the Los Angeles Regional Water Quality Control Board at (213) 576-6600. DTSC is overseeing the cleanup of the Chino Hills site to ensure compliance with all applicable laws and regulations and to ensure that final conditions at the site are protective of human health and the environment

And the kind of things you are talking about here, make no mistake about it, cause cancer, mutations, genetic mutations. Those are the main things. And they will cause death. And most of those things do not show up, you see. Because radiation -- radiation cannot be seen or smelled or tasted, or in any way sensed with the senses. And when it gets ingested into the body through our water or our food or our air, it takes two to 20 or 30 years before it shows up as cancer. And we don't even know until future generations that it mutated our genes.

DTSC takes community health concerns very seriously. As stated in the response to General Comment No. 2, the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center evaluated both adult and children's cancer in the Chino Hills area and found no evidence of cancer increase in the Chino Hills area. You may wish to consult the summary report of these findings, which is available for review at both the Chino Hills library and at the Department of Toxic Substances Control office in Cypress. You may also wish to contact Dr. John Morgan of the Desert Sierra Cancer Surveillance Program of the Department of Health Services at (909) 799-6181 for further information.

As mentioned in the response to General comment 4, DTSC is evaluating the existing levels of uranium at the site based on toxicity. The cleanup of depleted uranium based on radioactivity is under the jurisdiction of the Department of Health Services, Radiologic Health Branch. You may wish to contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360 for further information on the health effects of uranium due to radioactivity.

MS. TAMOUSH: *Excuse me, ma'am. That is more than five minutes.*

MARJORIE MIKELS: *Thank you.*

AN UNIDENTIFIED SPEAKER: *This is a town meeting and she has a right to speak.*

MS. TAMOUSH: *You are welcome to come up again. The next speaker is Duane Thompson.*

DUANE THOMPSON: *I will give her four of my minutes.*

MARJORIE MIKELS: *When the people in this community turn on their faucets and they find water coming into their tubs that is yellow and brown and so forth, as people have unfortunately in these communities, okay, then it is not for you, the Department of Toxic Substances Control who we pay, to protect us to gloss over this stuff and protect those huge corporations that pay our politicians to get into office and to make us all believe this is safe. This is not safe stuff. And the people in these communities, when they sell their houses, they may be required to disclose this stuff, stuff that was never told to them before they bought their homes.*

As stated in the response to your comment on pages 101-102 of this Response to Comments, Aerojet operations have not impacted drinking water sources used by the City of Chino Hills.

Now, I just hope that this will not be, "We are going to screen a little dirt and see if we will get some munitions, and if so, we will explode them on the site and everything is going to be really cool because we are watching and monitoring the water." No. They need to be called upon to clean it up. If it costs billions of dollars, well, it might just go a little bit into the profits of these companies who were benefiting and profiting from making weapons of mass destruction which right now we are using to blow up people all over the world. Thank you.

Perched groundwater at 35-40 feet at the former Redwater Pond will be pumped at the time of the excavation of soil in that location. In response to public comments, groundwater at the 58-foot zone at the former Redwater Pond and at the Upper A-12 test area will be evaluated for pumpability to determine whether or not it can be removed from the subsurface. Based on the results of this testing, DTSC may consider a modification to the Remedy requiring the facility to pump the groundwater. However, preliminary groundwater sampling data collected to date at both the Redwater Pond and the Upper A-12 Test Area indicate that the water may not be pumpable, due to the small amount of water present, and the amount of time it takes to collect sufficient water for a sample (3 hours in one instance).

If, at the time of termination of Corrective Action, groundwater exists at the facility above health based levels, DTSC will require Aerojet to include provisions for groundwater monitoring over seasonal cycles to address migration issues and provisions to prevent future users of the site from being exposed to the water.

DUANE THOMPSON: *How do we get a TAG?*

Mr. SENGA: *A TAG?*

DUANE THOMPSON: *How do we get a TAG?*

MS. BROWN: *I can respond to that. If you can write to us, okay --*

DUANE THOMPSON: *Tell me what a "TAG" is. Let's everybody know where we are at now and answer that, and I will sit down. Thank you.*

MR. SENGA: *You are talking about the Technical Assistant Grant?*

DUANE THOMPSON: *Yes, sir.*

MR. SENGA: *Okay. This is technical assistance forms to provide technical assistance relating to the activities in the community so that the community can be explained, and we sit down to re-say anything that the community needs in order to know what is really being done at the site. And something we have to pay for this, and that's what you are talking about. So my suggestion is you can write to us, the Department of Toxic Substances Control, and we will see what -- you know, I will inform and find out exactly what we have to do to get it. I have never been -- I have not been involved in getting a grant. I know that there is a way to do it, and I will find out.*

Please see response to General Comment No. 5

DUANE THOMPSON: *Would you please include that on the mailer for everybody that is on the mailing list?*

MR. SENGA: *Yes.*

DUANE THOMPSON: *Thank you.*

MR. SENGA: *Let me just make one comment, just a statement, about the earlier comment. I want everyone of you to know that my responsibility is not to Aerojet. My responsibility is to the community of this people, and I am not going to pave over any area unless it is clear. I have a responsibility to protect every one of you. That is my job and I will do it. Thank you.*

MS. TAMOUSH: *The next speaker is Ken Baxter.*

KEN BAXTER: *I overlook Aerojet from up on Rainbow Ridge Road up on Carbon Canyon. And through the years I have seen that site and I have seen the explosions every day. The explosions usually go off on a daily basis. You would hear the sirens and then you would hear the explosions. There will be big clouds of smoke that would come out of the tunnels. Christine Huntley, I think, or Brown, this question is to you. Just how deep are those tunnels and how deep would you have to go to recover all of the spent munitions? Does anybody know that?*

There are no “tunnels” on the site. It is probable that the commenter is referring to earth covered concrete bunkers formerly used to store ordnance. These bunkers are visible as one looks south toward the site from Rainbow Ridge. Prior to 1993, the explosions that the nearby community heard were likely originated from routine ordnance testing and the OB/OD operations. Ordnance testing operations occurred through 1995. Ordnance testing is generally much quieter than the OB/OD operations. Ordnance test firing produced sounds that are similar to a rifle discharge in secessions. After 1995 when Facility operations ceased, explosions that may have been heard were from UXO demilitarization operations conducted in Test Area 16 with selected items being blown in place (BIP)

OB/OD operations were the largest and possibly loudest, in which numerous ordnance items that did not meet government specifications were destroyed. As much as 100 pounds of high explosives would be used to destroy these items at one time. As a result, UXO in the OB/OD area was the deepest, being found at depths up to 20 feet. The OB/OD area is being remediated under a separate Closure Plan

approved by DISC. Testing operations while the facility was operating occurred in secured areas, typically box canyons, in which guns were mounted on permanent structures and fired into an impact area. Since 1995, ordnance sweeps have been conducted at the facility to remove unexploded ordnance (UXO) from the soil and are continuing. The recovered UXO was then destroyed in Test Area 16. UXO demilitarization operations in Test Area 16 were much smaller, consisting of no more than 10 pounds of explosives per charge. The UXO and explosives were covered with 3 feet of soil to minimize the scatter of metal fragments during detonation. The community will receive notice in advance via an advertisement in the Chino Hills Champion of future detonations occurring at the facility as a result of ordnance collected from sweeping activities and soil screening.

MR. SENGA: *Thank you for that comment. We will take that comment. Some of these comments that you are going -- the comments that we are going to be getting tonight, some of those comments I cannot answer them tonight. What I can do is basically clarify the questions, some of the questions that you are -- some of the questions that you are going to ask. That's what we can do tonight, is clarify those questions, make sure that we understand your question. And even it is just information that we can readily provide to you, we are going to do that. Otherwise, what I would like to do and what I have to do is to go back and research this information. Because it is important that I give you the right answer. And the worst thing that I can do tonight is make a guess. And I don't want to do that. So I will -- we will take your comment and you will get a response on that.*

KEN BAXTER: *My question is directly if it is hundreds of feet deep, how do you intend to recover that? I don't see how they can do that. And then also the wells, you know, if they are only doing surface water, and that's all I heard tonight that they are checking surface water, even though you have done wells before, you know, drilled holes in things, how deep did you go? Did you go a thousand feet? A hundred feet? Five hundred feet? How deep is that? I would like to know. Because we have wells all around our neighborhood and, you know, what are we supposed to do about that now? And who is measuring the water right now?*

Contamination in soil at the facility, including explosive chemicals, CS (tear gas)-containing material and unexploded ordnance, is limited to the first few feet of soil with the exception of the former Redwater Pond. Soil contaminated with RDX and 1,3,5-trinitrobenzene at the former Redwater Pond extends to 35 feet and the ordnance debris at the OB/OD area can be as deep as 20 feet. The site investigation included sampling at depth to ensure that extent of contamination was adequately defined.

For information regarding the hydrogeology of the site and the results of the groundwater sampling performed at the site, please see the response to General Comment 7

MR. SENGA: *I will have the project manager clarify that one in regards to that one. Just one second.*

MS. BROWN: *Okay. First of all, as I mentioned in my presentation, we did look at ground water, not only wells on the site, which were 100 feet, 150 feet deep. Also we drilled borings in two locations. So ground water was addressed. And, based on your comments, we can certainly look into it further and do more testing, if needed.*

In terms of detonations, basically there was one area of the site that was used for detonations. They were underground eight, ten feet. That's basically the depth that we are talking about. And it was an area that was well tested and overseen by DTSC, and it is not yet closed. It happens to be a different project than what we are talking about here. But that site was investigated by DTSC and tested for chemicals, as well as the soil screened for ordnance. And so the depth, I would say, is eight to ten feet, is what the maximum depth that anything would have been buried there and detonated.

MR. BAXTER: *The size of the explosions that came out of those tunnels was probably a hundred feet tall. Now how could you do that ten feet under the ground? I don't believe that. You know, so.*

MR. SENG: *Thank you for that comment and we will find out. We will research that.*

As stated earlier, there are no tunnels on or related to the Facility. The methodology in sampling the SWMUs and AOCs was thorough and comprehensive. If an activity could potentially impact underlying soils at deeper depths, the RFI sampling plan takes that fact into consideration. For example, culvert sections were buried vertically in some test areas to provide confinement for specific testing operations. For a buried culvert with an open bottom, impacted soil related to the culvert would be expected to begin at or near the bottom of the culvert extending to deeper zones. Thus, if the culvert extended 10 feet into the ground, the sampling plan would call for collecting soil samples beginning at 10 feet and extending beyond in 5-foot increments to about 20 feet depth. The soil samples would be analyzed for the chemicals of concern. If chemicals were detected in the deepest sample (20 feet in this example), another boring would be placed in the area and soil samples would be collected at depths greater than 20 feet to characterize the vertical extent of chemically impacted soil. Similarly, additional borings would be placed around the perimeter of the culvert to characterize the lateral extent of chemically impacted soil. This process continues until the vertical and lateral limits of impacted soil around the SWMU or AOC are defined.

MS. TAMOUSH: *Next speaker is Suzanne Steinseifer.*

SUZANNE STEINSEIFER: *Can I do it a little bit later?*

MS. TAMOUSH: *Kay Zearfoss. Sorry if I mispronounce your name.*

KAY ZEARFOSS: *I just have a quick question. I received a flyer recently and it quotes McLaren Hart. It talks about remedial measures, one of them being in place cap and closure, and another one incineration. And I didn't hear anything about that tonight. Is that -- I'm sorry. I thought I could shout that out.*

MR. SENG: *If you want to make a comment, I would appreciate if you can go to the microphone so that everybody in the audience can also hear the question.*

KAY ZEARFOSS: *I received a flyer recently in the mail and it talked about remedial measures proposed by McLaren Hart Environmental Inspection. One of them being in place cap and closure, and another one being incineration. And I haven't heard any talk about that tonight. Is that something that is going to happen?*

MR. SENGA: *Let me just make a comment about that. I am not – the proposal that has been put forward, which is what we have put in the – in the repository in Chino Hills, does not include incineration.*

KAY ZEARFOSS: *Thank you.*

Cap and Closure and incineration are not part of the Corrective Measures. The Corrective Measures are described in Section II of this Response to Comments and in the Corrective Measures Workplan. A copy of the Corrective Measures Workplan is available in the Chino Hills Library.

MS. TAMOUSH: *Next speaker is Donna Denver.*

DONNA DENVER: *Well, I am here for my children, and I just wanted to ask, you know, they tell us to put sun block on our kids because they are going to get cancer from the sun. I want to know if this summer I can fill my kids' pool up with water from the hose. How do I go about testing the soil in my garden? Can you answer me on that?*

MR. SENGA: *Okay. Thank you for that comment. We are going to resubmit that and get back to you on that. But as far as filling this pool in your back yard with water, I am not aware of any reason why you cannot do that.*

As stated in the response to comments made by Ms. Marjorie Mikels on pages 101-102 of this Response to Comments, the contamination in shallow, seasonal groundwater at the Aerojet facility has not impacted local drinking water supplies. For further information on your drinking water, please contact the City of Chino Hills or your local water purveyor.

DONNA DENVER: *Okay. Where do you go to get your soil tested?*

MR. SENGA: *Where do I go to get my soil tested? I haven't had my soil tested.*

DONNA DENVER: *The soil at Aerojet. Okay. If I have somebody in Alaska that is drilling in Alaska and testing soil there who I am related to, can I give him some of that soil?*

MR. SENGA: *The soil -- okay. In order for us to accept data in California, what happens is that all the laboratories that do the testing of chemicals have to go through a certification process in order to make sure that the methods they use, the equipment they use, the personnel they use, are adequate to meet the standards served by the State. Unless they can do that, then obviously any information they provide will not be acceptable. We cannot do that. There are, however, all the laboratories that are certified to do that, are assembled in California. If the laboratory you are referring to is certified by the State of California, sure, yeah, they can test.*

Testing of soil at hazardous waste sites under the jurisdiction of DTSC is conducted by a geologist registered in the State of California, or by DTSC representatives. Once the soil sample has been collected, it is sent to an analytical laboratory that has been certified by the State of California. This means that the state has reviewed their laboratory practices and that these practices meet stringent state

standards. In addition, analytical laboratories that have conducted analytical testing must complete a U.S. EPA Region 9 RCRA Facility Investigation Laboratory Quality Control Summary form for the analytical data. This assures that proper QC results conform to the RFI's Quality Assurance/Quality Control (QA/QC) plan.

DONNA DENVER: *Okay. And then what Duane was talking about with that grant, they would have somebody on there that could be able to tell us things like that, honestly?*

MR. SENGA: *Again, at this time I cannot -- I said that I have never or I have not dealt with the Technical Assistant Grant, but I will find out what it takes, or, you know, how to get one if there is one, if there is a way to get one for the community.*

DONNA DENVER: *Okay. Thank you.*

MR. SENGA: *Thanks.*

Please see response to General Comment No. 5

MS. TAMOUSH: *Next speaker is Lee Ann Williams.*

LEE ANN WILLIAMS: *First of all, I am not really a good map reader. I think actual photographs of the area overlooking where the sites were, where the homes are, where the homes are relative to the area, would have really been helpful, maybe answer a lot of questions, possibly brought in a lot more questions.*

Aerial photographs were made available to the public in the Aerojet meeting on May 25 and the City Council meeting on June 7, 1999.

What I am kind of reading here and getting a feeling from you is that you are really wanting to clean up the area. And it states here in the evaluation to the extent of the facility is to protect the public health. When hearing that and reading it, you want to move the things safely from us. But we have been contaminated. Our creek water has not been tested from the runoff. Our soil has not been tested. We have kids back there playing. I also like to know if there has been a cancer cluster study been done, and will this be done, and how long. A lot of us had many problems during our pregnancy. A lot of people can tell you of different types of cancer. I have been here for 20 years and I hate seeing my daughter sick all the time. I hate losing friends.

DISC representatives empathize over the loss of loved ones. It is our mission to protect human health and the environment, and we have required Aerojet to adhere to stringent standards regarding the site investigation and cleanup goals. Over 500 samples were collected and analyzed for a number of contaminants, predominantly explosive chemicals, perchlorate and metals. A health risk assessment has been performed to identify areas requiring remediation, and to established cleanup goals for all areas where contamination exceeds acceptable health based levels. The cumulative cancer risk level for all hazardous substances found at Aerojet has been set at 1×10^{-6} and the cumulative non-cancer health

index has been set at less than 1. Based on the results of the Health Risk Assessment, present conditions at the site do not pose a health hazard to off site residents.

Health effects outside of the proposed remediation activities, which pertain to the community impacts resulting from past operations by Aerojet, have not been evaluated by DTSC. A study of this type is outside of the scope of the proposed project and is outside the legal jurisdiction and expertise of DTSC. However, Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center has conducted a cancer study of both childhood and adult cancer in the Chino Hills area. The results of the study did not indicate an increased cancer rate in the community. Please see the response to General Comment No 2 for further information.

Also on page five, if I understand this, it says here, "Statutory authority for permitted facilities may extend beyond facility boundaries." What does that mean? "And time of release does not matter." Time of release of what? Those are my questions. Those are my comments.

MR. SENGA: *Thank you for the comment. Let me just make a clarification on a couple of things. As far as the maps, I apologize. The maps may not be as good as they should have been, and definitely we will try to do a better job next time. The next question, the other thing that I want to clarify is the question about the extent. You said that we can go outside the boundary of the facility. What that means is that the statutory authority extends outside the boundary of the facility. So if the releases -- if releases are found to be extending outside the boundaries of the facility, the facility is still responsible. So the responsibility does not end at the boundary of the facility.*

These statements refer to the authority of DTSC under the corrective action process. The purpose of corrective action is to identify and to evaluate the nature and extent of contaminants at a site, and also to develop the appropriate remediation measures that would be necessary in order to protect public health and the environment. Thus, if contamination is identified and found to be leaving the site, the investigation will follow the pathway of chemicals as far as necessary, even if it goes beyond the boundaries of the facility. Further, DTSC will require the pathway to be evaluated regardless of the time period at which the area became contaminated. Again, this is the corrective action process. At the Aerojet site, no chemicals or contaminants have been found leaving the Facility at levels posing a risk to human health or the environment.

LEE ANN WILLIAMS: *So then our creeks will get tested and our water and the soil in the creeks from the runoff behind the homes of the properties?*

MR. SENGA: *Okay, yes. The answer is yes.*

LEE ANN WILLIAMS: *They will test?*

MR. SENGA: *Yes.*

LEE ANN WILLIAMS: *All right.*

MR. SENGA: *Thank you.*

Surface and subsurface water in a number of locations on and around the Facility, including two off site locations north of the site, were sampled for the chemicals of concern. Please see the response to General Comment 7 for further information.

MS. TAMOUSH: *Next speaker is Fred Sharp.*

FRED SHARP: *I am happy to find out that it extends beyond the boundaries. Because we had a few problems down the creek from the area. The neighbors over here found a hand grenade in their back yard about a month ago, and the bomb squad came out and blew it up. My sons and his friends found approximately 20 rounds of M-1 ammunition dated 1947 which was probably tested up there. It was still in clips. And as the water comes down that creek, there is more ordnance that are going to start showing up. I just want to know who is going to be responsible for it. And if you need some evidence, I brought one of the clips with me.*

According to the Sheriff's Department, the grenade that was found was inert, and was of the World War II "pineapple" types seen in the movies. These items, if inert, can be purchased as souvenirs through mail-order catalogs. The important matter is that these types of grenades were taken out of production prior to Aerojet's commencement of operations in Chino Hills and were never assembled or tested at the Aerojet facility. Similar to the grenade, Aerojet did not assemble M-1 ammunition or test this type of ammunition at the site. Further, the commenter notes that the items were stamped 1947. Aerojet did not occupy the site until 1954. As part of the facility investigation, the drainage systems leaving the Aerojet facility have been swept for ordnance. The ammunitions presented by the commenter were probably used by and discarded by hunters or other non-Aerojet related personnel.

MR. SENG: *Thank you for that comment. And we will, as far as -- again, as I said, the responsibility for cleanup on hazardous waste or any waste that are related to the Aerojet site, the responsibility squarely is on Aerojet.*

AN UNIDENTIFIED SPEAKER: *On Aerojet?*

MR. SENG: *On Aerojet. That's what I said.*

AN UNIDENTIFIED SPEAKER: *How are you going to get the money out?*

MR. SENG: *The Department of Toxic Substances Control is authorized to recover its costs from the facilities that we are cleaning that we are involved doing the work. Let me tell you this. Tonight, the cost for me to come here to tell you this will definitely be paid by the responsible facility, which is Aerojet. So the cleanup and anything that has to do with whatever we do to insure your safety, the responsibility and the cost of that will definitely be borne by Aerojet. They have been paying the bill for that. We get a bill for that cost. So that's where the responsibility is. Thanks.*

As Mr. Seng stated, Aerojet is financially responsible for the necessary remediation of their facility. Further, Aerojet is required by state law to reimburse DTSC for oversight work related to Corrective Action at the Chino Hills Facility.

MS. TAMOUSH: *The next speaker is Raymond Kerr.*

RAYMOND KERR: *Good evening. Since the information you shared with us since Aerojet has been here approximately 50 years and letting off, who knows over what period of time. My understanding is your organization is mainly concerned with cleanup. What organization looks at what the long term affect has been on the people that live in the area? Who studies the effects of what have taken place to*

find out if there is a significant rate of cancer, of miscarriages, or other diseases? Who does that type of work? Who does that type of follow-up to know whether we, as citizens, are at risk in a limited area, in an area that was letting off chemicals? Is your agency responsible for that? Is there another agency? Or is that something that is just forgotten?

MR. SENG: *What I said was the Department of Toxic Substances Control is responsible for the cleanup. And you have to remember that within the State of California, there aren't very many agencies that are involved in the protection of human health and environment. It just so happens that in our case there are other agencies within the State of California, that do that, that are involved with research and I can find that information out.*

DTSC is concerned with the long-term effects of contamination caused by the responsible parties. All proposed remediation efforts under corrective measures are selected based on long term protection of human health and the environment. DTSC, however, does not have jurisdiction to conduct investigations of health effects caused by a facility's past operations. The Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center evaluated the occurrences of childhood and adult cancers in the Chino Hills area. The study found no evidence of increased cancer cases based on the population of the area. A summary report of these findings is available for review at both the Chino Hills Library and at the Department of Toxic Substances Control in Cypress. Please see the response to General Comment 2 for further information.

RAYMOND KERR: *Is there any agency specifically looking in our area?*

MR. SENG: *I cannot give you an answer now. I will find out. We will take that comment and we will make sure that we give you an answer to that.*

Please see the above response.

RAYMOND KERR: *The other question. Outside the area of Aerojet property, what is your radius for testing for runoff for pollution? Is it ten feet from their border? Is it a mile from their facility? How far of a radius are extended do you test. Since their property is up on a hill, potentially runoff can go in a lot of different directions and cover quite a wide area. How far from their property perimeters do you test?*

MR. SENG: *I cannot give you an answer. I know we have -- I cannot give you an answer in terms of how far we have tested, but I will find out and I will give you an answer to that.*

DTSC has jurisdiction to require the facility to conduct sampling beyond the facility's boundaries if needed. It is a normal practice for DTSC to define the extent of contamination under the RFI to ensure proper site characterization – even beyond the facility boundaries if necessary. At Aerojet, DTSC has conducted offsite sampling to approximately 1.75 miles west of the Facility along Soquel Canyon Creek and approximately 0.5 miles north of the Facility along the two drainages headed towards the City of Chino Hills. DTSC did not expand the investigation beyond these distances because no contamination was detected at these distances from the Facility. Therefore, additional off site testing is not warranted. See the RFI Addendum Report, Sections 3 and 6 for further information. The areas east and south of the

Facility are hills higher than the operation areas and thus, would not be impacted by water runoff from the facility.

RAYMOND KERR: *And the other thing would be is what is the life of those type of chemicals that have runoff that can pollute areas? How long are they active? How long are they hazardous to our health? Do they have – I mean, what does it take to break them down so that they are not a threat? I don't know if there is a life or a concentration level. That would be my question.*

MR. SENGA: *Thank you. That is a good comment and we will find out.*

The RFI sampling plan focused on identifying the chemicals of concern that were used during operations at the Facility or may have been produced as break-down products (chemicals produced due to degradation of chemicals of concern in the environment). Thus, the sampling plan for the RFI was developed to look for all the suspected chemicals and their breakdown products. A complete description of the chemicals of concern and how they act in the environment is included as Section 5.0 in the Revised RFI Report (McLaren/Hart, January 20, 1999). Explosive chemicals such as RDX, HMX and perchlorate, and CS (tear gas) residue may persist in the environment for many years. However, the RFI Report and Health Risk Assessment demonstrated that there is no health threat to off site residents from contamination on site. Please see the response to comments made by Mr. Andre Hernandez on page 21 of this Response to Comments for further information.

A perchlorate level of 83.2 ug/L was detected in Soquel Canyon Creek (at the southwest corner of the facility) in summer 1998 when water was flowing in the creek. Perchlorate, RDX and HMX were also detected in other surface water locations at the facility. However, perchlorate was not detected 1.75 miles downstream from the facility boundary in Soquel Canyon Creek. This indicates that the extent of contamination is limited. Furthermore, the risk assessment indicated that the perchlorate concentration found at the boundary of the facility do not pose a threat to human health or ecological receptors. Nevertheless, the suspected source in the landfill will be remediated during the implementation of the Corrective Measures, and the concentration of perchlorate will likely decrease even more significantly after the remediation effort. All soil containing explosive chemicals above the cleanup levels will be excavated and hauled off site. The two areas containing CS (tear gas)-containing material will be excavated and the contaminated material will be placed into closed containers and hauled off site to an appropriate treatment, storage and disposal facility.

MS. TAMOUSH: *Next speaker, Steven Hood.*

STEVEN HOOD: *This is Steven Hood. There is -- I have some concern after listening to the earlier presentation that there is some things about the site that don't seem to be hitting home with you folks in terms of your familiarity with the site and with the surroundings. This area, a lot of it is based on old hot springs and old resort areas where we have underground aquifers that feed from one area to the other. And you can't just depend on local site borings or local testing to really establish the impact of this community. Because we do have water that will go from one collection point, and an aquifer will pop up miles away. It is rampant in this area. There is a very strong possibility that they are going to have more than you bargained for than just surface testing and through underground well testing.*

For information regarding the hydrogeology beneath the site, Please see the memo prepared by Mr Paul Carpenter, DTSC geologist for further information. This memo is included as Attachment D to this Response to Comments.

Hot springs are located around and south of Sleep Hollow, which is located approximately 2.5 miles west of the facility. Typically, hot springs are found along active fault lines where deeper, hot water can migrate to the surface. Hot spring location can change as a result of earthquake activity but only along the trace of the fault. No active fault lines are known to cross the Aerojet site. No hot springs occur in or near the Facility. Therefore, it is unlikely that an earthquake will result in movement of significant amounts of water beneath the facility.

I grew up a few miles from the American River. And I understand what happens when you get it wrong. And there are some things that there is a high degree of confidence in the action with regard to the Aerojet facility with regard to that community. And that community is depending on bottled water. That doesn't help the animals and other livestock and other things that get into our food chain. And it is essential that we proceed very carefully here and understand that there is a relationship between what happens, even during the cleanup process, that you can interrupt and go into the soil and then introduce into this underground stream that wasn't there before. Please be very, very careful in terms of mapping what underground streams go through that property.

Please see the response to your comment above.

I am also concerned that there doesn't seem to be any type of activity with the rainy seasons. We are in an up slope area where we get dramatic amounts of rainfall that can last for a six-month duration.

The Corrective Measures will not be implemented during periods of heavy rain, when site conditions make it impossible to operate the heavy equipment needed for the field work. Surface water, if present, will be directed around areas where remedial activities will be taking place, thus minimizing the chance that surface water would mobilize the contaminants and transport explosive chemicals in soil or surface water off site.

There is also concern when you are doing this excavation that, you know, there is potential for airborne substance to come up and be blown. We have predominant winds every afternoon through here. This is not an occasional thing. This is all the time where you are going to have some problems that are going to have to be dealt with that are specific to this location that you won't have found in other places. We are very, very concerned that we have a textbook type of response on a none-textbook type of case.

The Corrective Measures include provisions to control and minimize the generation of dust. Dust suppression methods, including water, will be used. Air monitoring for dust will be implemented, and excavation of soil will cease if dust concentrations exceed 10 mg/m^3 . Excavation of soil will also cease if the wind speed exceeds 25 miles per hour. These precautions are site specific and are described in Section II of this Response to Comments and in the Corrective Measures Workplan, a copy of which is available in the Chino Hills Library.

There is a concern that, you know, we have already had wells in the area shut down from toxic contamination, and it doesn't seem to be anything that says, well, you know, we are going to continue to do anything other than say, "Oh, well, about those where, you know, this is something that has been going on for quite awhile." Those wells cannot contaminate themselves.

Perchlorate found in the municipal water wells in the Chino Basin is unlikely to have originated from operations conducted at the Aerojet Chino Hills facility, because these wells are upgradient of Aerojet. Nitrate impact to groundwater beneath the Chino Basin is generally believed to be related to the dairy farm activities in the area. However, DTSC will require Aerojet to sample surface and groundwater sources for nitrates as stated in Section II of this Response to Comments.

I did not hear any response to this woman's response or question about a cap and closure procedure. I know that you responded to the incineration not being part of the procedure. Cap and closure is one that we referred to that can lead to some problems down the road, and the immediate situation is resolved, but it doesn't really do much for us later.

Cap and closure in place is not one of the proposed corrective measures. The Corrective Measures are described in Section II of this Response to Comments, and in more detail in the Corrective Measures Workplan.

We are concerned in terms of the economic impact to our city and any bonding for problems that we find after you are gone, when you guys say, "Hey, it is clean." You know, 50 years from now, 25 years from now, what happens to (a) our property values; or (b) the cost to our city to protect its citizens?

The Corrective Measures are designed to clean up the contamination at the Facility and reduce the risk to human health and the environment to acceptable levels. If residential cleanup standards for chemical contamination in soil or groundwater are not met, DTSC will place a deed restriction on the property. Because present day ordnance detection methods cannot guarantee that all ordnance items have been removed from an area, DTSC is requiring Aerojet to submit a Long Term Operation and Maintenance Plan to ensure ongoing protection of human health and the environment with respect to ordnance. Please see Section II for further information. If, at the time of termination of Corrective Action, groundwater above health based cleanup levels remains at the Facility, DTSC will include provisions in this plan for groundwater monitoring over seasonal cycles to address migration issues, and provisions to prevent future users of the site from being exposed to the water. The public will have an opportunity to formally comment on the provisions of this plan prior to termination of Corrective Action.

And I guess the last one is once you have done your job on cleaning up as effectively as you can, there are some processes that I would encourage you to look into in terms of biological agents that will follow-up those cleanup procedures that tend to continue to stabilize things over time. And we haven't seen anything about that at all. Thank you very much.

MR. SENG: *Thank you. Thank you for your comment. All those are very good comments. I appreciate that. And let me just, if I have not answered the question earlier about the cap. The*

remedial measures that are proposed do not include a cap. So there is no proposal for cap. So, I'm sorry, but if I don't answer, if I did not answer that question earlier.

Biological processes have and would continue to degrade organic compounds found at the site. Biological processes to remediate the SWMUs/AOCs were considered before recommending excavation and off site disposal of soil, but were rejected due to implementability (time consuming to implement and no guarantee that the cleanup level for RDX of 3 mg/kg soil could be met). Thus, the Corrective Measures include provisions to remove the contaminated soil from the site. As the source areas are removed, residual levels in water are expected to decrease in time through natural attenuation and biological degradation.

MS. TAMOUSH: *Next speaker is Pat O'Connell.*

MR. SENG: *That's okay. We will wait for –*

PAT O'CONNELL: *Hi. I would like to address this more to the reporter -- to the court recorder. My father died when I was 17 years old because he died of asbestos cancer. The companies which exposed my father to cancer knew 25 years before he had a symptom that they were exposing him to this. Just putting that in context.*

I have read the document that is at the City Hall. And while I am very happy that the whippoorwill and the Oaks and the diamond rattle snake is all going to be fine, I did not see any documentation, or any sort of specialists that are looking at the long term affects on our children who are born and raised in this community. I would like to get some baseline data that would show the amount of stillborns, miscarriages, learning disabilities, chronic asthma, and respiratory problems, eye irritations, growth rates, any kinds of documentation, such as that. I think we needed to start ten years ago. I think we are way -- we need to get something going now for this type of documentation.

The Health Risk Assessment performed as part of the site investigation considered noncancer health risks, including those mentioned, in the evaluation of present site conditions and in the impacts of the Corrective Measures on human health. In addition, the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center has conducted a study of childhood and adult cancer rates in the Chino Hills area, and found that the rates were not elevated. Please see the response to General Comment 2 for further information.

I would also like to go on the record to note there are no City Council members here or elected officials and that Aerojet is being poorly represented. Thank you.

MR. SENG: *Thank you for the comment. That is a good comment. We appreciate that. And I can assure you that we will look into this and that information will be provided to you. Thanks.*

A meeting was held specifically at the request of the City Council on June 7, 1999.

MS. TAMOUSH: *Next speaker is Christine Alfonso.*

CHRISTINE ALFONSO: *Hi. My question is -- I understand that your organization, your department, is handling the investigation and the cleanup of this contamination. But I also understand too that you can't do everything yourself. What I want to know, is there anyone affiliated with Aerojet that is involved in either the investigation of this or the documenting of the investigation? Or is it any way involved in any kind of decision on how it is going to be cleaned up or what is going to be cleaned up? And the reason I ask this is because in -- nowadays you have got companies that are subdivisions of another company who is a subdivision of another company who is a subdivision of another company. Have you guys done any kind of checking for the analysts and the representatives and the people that are, you know, giving, providing you data and information, making sure that none of these people are affiliated with Aerojet in any way?*

MR. SENGA: *When we reveal -- let me just say this. The Department -- the Department evaluates the data that is a supplied by the contractor. We, ourselves, the Department, is a regulatory agency. We oversee what these facilities do. It is, as far as who is doing it, Aerojet has a contractor who they pay. They are the one who produce the documents. We ourselves, regardless of who is doing the work, we have a responsibility to look at that information in terms of its content. And that is how we make our decisions. The decisions are not based on who produced documents. We ourselves evaluate that document and the information in terms of accuracy, the significant aspect of that information, and how the information is going to protect the human health and the environment. That is our responsibility and that is what we do.*

As mentioned in Mr. Senga's comment, DTSC reviews the documents submitted by the facility independently. DTSC has specialists trained in toxicology, geology and engineering that review the documents for completeness and technical adequacy. The document review process includes independent evaluation and validation of the information provided by the facility.

CHRISTINE ALFONSO: *Okay. So you evaluate the data that is given to you, but you don't do any evaluation of the entity that is providing the data? Is that what you are telling me?*

MR. SENGA: *We can do that. In this case, I am not aware that we have done that.*

DTSC does not evaluate nor provide recommendations regarding private consulting companies hired as contractors by facilities that are regulated by DTSC. DTSC reviews the documents themselves for technical adequacy and consistency, as mentioned earlier. In addition, DTSC personnel conduct oversight of fieldwork as information is gathered. DTSC does not have the regulatory authority to bar individual contractors from providing documents for DTSC regulated projects. However, each document that is provided to DTSC for review must be signed by a California registered engineer or geologist certifying the documents and the information in the documents are true, accurate, and complete to the best of his/her knowledge. The individual's professional license is in jeopardy if the work does not meet professional standards.

CHRISTINE ALFONSO: *Is there anybody that is independent of Aerojet that is doing any kind of testing or any kind of investigation independent of the contractor that is supplied by Aerojet?*

MR. SENGA: *The Department of Toxic Substances Control also maintains -- we have our own laboratories where we take samples. During the time that samples are taken, we can take samples and have them analyzed by our own lab. And that is what will happen during the work. So we will -- we will also be taking samples that we have analyzed by our own department lab in order to make sure that the information is correct.*

Split samples were collected from certain areas of the Facility at the discretion of DTSC in accordance with procedures described in the RFI Workplan. Once the sample is collected, it is split, with one half analyzed by the contract laboratory and the other half at DTSC's own laboratory. Analytical results from each laboratory are then compared to each other to provide an independent confirmation of the reported results. As reported in the RFI Addendum Report, the split sample results were similar.

CHRISTINE ALFONSO: *I have just two more questions. When a decision is made as to -- I mean, after you are done with all the questionnaires and the questioning and everything, and its final decision is made as to what is going to be cleaned up and the extent of it and all of the details, will there be somebody from Aerojet on the board making the decision?*

MR. SENGA: *I can answer that really, no.*

CHRISTINE ALFONSO: *Okay. I have to ask.*

MR. SENGA: *No -- yes.*

Upon the incorporation of public comments and a reevaluation of the proposed corrective measures, DTSC will issue the final Remedy decision approving or requesting modifications to the Corrective Measures. This decision is DTSC's alone.

CHRISTINE ALFONSO: *The only other question I have is you said earlier in your presentation that there was subsurface water found to be contaminated. Can you tell me how far subsurface -- how far below the ground are we talking? And do they have some size of the contamination?*

MS. BROWN: *Forty to 60 feet.*

CHRISTINE ALFONSO: *Forty to 60 feet?*

MR. SENGA: *Forty to 60 feet.*

Subsurface water encountered beneath the former Redwater Pond at 35 feet deep and at maximum depth of 58 feet contains elevated levels of explosive chemicals. The lateral extent of the chemical impact has been limited to the area adjacent to the former Redwater Pond. To date, samples collected from two monitoring wells at the former Redwater Pond indicate that no migration has occurred. Subsurface water at 40 feet deep at the Upper A-12 test area is contaminated with perchlorate. Aerojet will be required to conduct additional sampling at the Upper A-12 Test area to determine if migration is occurring. Sampling of several groundwater wells both on and off the site revealed no contamination. Please see the response to General Comment 7 and the memo by Paul Carpenter, DTSC geologist, (memo is included as Attachment D) for a description of groundwater contamination at the facility.

CHRISTINE ALFONSO: *Do they have any idea of the size of the plume?*

MR. SENGA: *Christine, maybe you can answer that.*

MS. BROWN: *Okay. In one area we installed monitoring wells and the water -- that contamination is very localized. That's in the former Redwater Pond, SWMU #7. The other area, upper A-12 test area, the contamination is at 40 feet, and we have not yet installed monitoring wells. And we will be doing that during the implementation of the cleanup.*

Two monitor wells were placed around the Redwater Pond, 40 and 90 feet distance from the edge of the pond. Water samples from each well did not contain detectable levels of explosive chemicals. Thus, the plume of impacted water is localized to the area immediately below the pond and is not migrating away from the source. The impacted water beneath the Redwater Pond is found in two zones, each approximately 30 feet by 60 feet in area and 5 feet thick. A detailed investigation of the Redwater Pond is presented in the McLaren/Hart documents titled "Investigation of the Former Redwater Pond (SWMU #7), Aerojet Chino Hills Facility" dated January 29, 1998 and the investigation is summarized in Section 3 of the RFI Addendum Report.

CHRISTINE ALFONSO: *Are these monitoring wells, or any of them, installed directly on the borders of the property or beyond the borders of the property, the underground monitoring?*

MS. BROWN: *Not beyond the borders. They are on the property.*

CHRISTINE ALFONSO: *On the property doesn't answer my question. Are they at the borders or on the property?*

MR. SENGA: *At the moment I cannot give you an answer to where the well placement is located. And that information at the moment doesn't indicate where the wells have been installed and any wells that are proposed. But that information is in the RFI Report and also is identified in the report that is in the repository. And we will be happy to provide that information as part of your comments.*

Groundwater wells located both onsite and offsite were sampled during the RFI.

CHRISTINE ALFONSO: *I appreciate that. If they are not directly on the borders of the property, I would like to find out if they plan on putting it. It would stand to reason if they are concerned about whether it is going to go beyond the property, the site, the contamination, wouldn't it make sense to put -- it is like a surgeon, when you have a tumor, he doesn't cut around the dotted line, he cuts a little bit around that to make sure he has everything. So it would stand to reason to make sure they have these wells outside the property line. Testing to measure in the center of the property doesn't do any good. It's got to be right beyond the edges if you really want to see if this has gone beyond -- if the water has gone beyond. If the contaminated water has gone beyond the property, the only way you are going to be able to find out is if they are right at the edge or beyond the edge of the property.*

Sampling of three on site wells and one off site well north of the facility has revealed that no contamination is migrating to groundwater located off site. The purpose of installing additional monitoring wells in the location of the contamination is to verify the lateral and vertical extent of the contamination and to determine whether or not the contamination is migrating

During the RFI process, where impacted water was suspected, a monitor well was placed inside the SWMU/AOC of concern. If impacted water was found, other wells were placed nearby and around the area to determine if the impacted water was migrating away from the source. The final step in the process is to implement the corrective measures and remove the source areas (impacted soil) from the site and continue monitoring the water. As the source areas are removed, residual concentrations in the groundwater will decrease with time. Monitoring wells have been placed at the former Redwater Pond and will be placed at the Upper A-12 test area during the Corrective Measures.

MR. SENGA: *That's a good comment. Let me make sure that I clarify this, that all the comments, all the response to comments will be in a document that the Department is going to prepare before they make the decision, and those responses will be provided to any -- to all of you who have made the comment. So I just want to make sure that I clarify that, because I know I did say that individually you are going to get that, you are going to get your answer, but it is going to be the response to comments which will include everybody's will be provided.*

AN UNIDENTIFIED SPEAKER: *Where will it be provided?*

MR. SENGA: *A copy of that document will also be put in the repository in the Chino Hills Library.*

MS. TAMOUSH: *The next speaker is David, I believe it is Tenniez.*

DAVID TENNIES: *Several of the things you have said don't have clear-cut definitions with them. For example, in your report you talk about there is some areas where the levels are below of what you are calling required cleanup levels, and some areas where the levels are higher and do require cleanup. But whether the levels are higher for these different materials, perchlorates, RDX, HMX, and the gases, what are the health affects of these things? They have been around a long time. I'm sure there has been a lot of studies done.*

What are the target organs and what are the health affects, and at what levels are these health affects seen? What are the occupational exposure limits for these materials? I'm sure they have been established. The military has been playing with them for years.

A risk assessment was conducted to determine the magnitude and probability of potential risks to human health from chemicals detected in soil and water at the Aerojet Facility. The risk assessment evaluates the potential carcinogenic and non-carcinogenic risk for the detected compounds and evaluates the result to residential scenario. If the risk assessment determines that the compounds pose a risk to human health at the detected concentrations, the assessment provides health-based cleanup levels (HBCLs) that protect human health under the residential site use conditions. The risk assessment is traditionally conservative in evaluating the risks. It assumes a person (adult and children) living at the contaminated area being exposed to the highest concentration of the combined chemicals for seventy years. Four compounds in soil, RDX, 1,3,5-trinitrobenzene, lead and dioxin were detected at levels higher than the HBCLs at several locations throughout the site. CS (tear gas) containing materials were found at two locations at the site. Soil or materials containing these compounds at concentrations higher than the HBCLs will be excavated and transported off site during the implementation of the Corrective Measures. As mentioned in the response to General Comment 4, uranium has been added as a constituent of concern to the Corrective Action.

Human health effects of the chemicals in soil at the Aerojet facility are summarized in the response to General Comment 6 and in Attachment C of this Response to Comments. The occupation exposure limits for the compounds to be remediated during the corrective measures are included in the Site Safety and Health Plan included as Appendix B in the Corrective Measures Workplan. Nerve agents ("nerve gas") were never detected at the facility. Please see Section 5 of the RFI Report for further information on nerve agents.

Do you have material safety data sheets available for all these materials? And I would like to see them. In 1997 we met in a neighbor's garage and -- Chris, you were there.

CHRIS PIONKE: *Right.*

Please see the response to General Comment 6 for further information regarding the health effects for constituents of concern at the Facility.

DAVID TENNIES: *We specifically asked the contractor to perform soil borings on the creek that runs behind the homes on Autumn in at least a couple of locations and go down, even by hand augers, several feet. But none of us ever saw any results on that, either in writing or any kind of response at all. What happened to that? Was it ever done? This is the creek where the 30.06 rounds were found. I think that bears further examination.*

MS. BROWN: *Right. That's a good comment.*

Offsite soil samples were collected on October 8, 1997 in the two drainage pathways exiting the Aerojet Facility towards the north as requested by the residents. No chemicals of concern were detected in any of the samples. Please see the response to General Comment 7 for further information.

As mentioned in the response to comments made by Mr. Fred Sharp on page 111, the 30.06 rounds did not come from the Aerojet site.

MR. TENNIES: *Although Aerojet did certain things up there, this was quote unquote a military site and the things you are talking about are only the things that were documented. There may be other things that were done. If they are finding ammunition that wasn't ever tested at that site in the creek behind their homes, there may be other things that went on there that are not documented.*

Please see response to General Comment No. 1. Again, the ammunition found did not come from the Aerojet site.

What are the remediation methods for these explosives? I know you are talking about hauling them away. That dirt has to go somewhere. How are you going to remediate it? Is that soil going to go through a permitted incinerator, or what? How do you remediate that?

The chemically impacted soil will be going to a Class II landfill certified to accept this type of material. After the soil is at the landfill, no other remedial measure will be necessary.

And how are you going to remediate the soil that is contaminated with the various gases? And how do you remediate tear gas and mustard gas? What are the breakdowns from that? If it's been in the soil 20 years, is it still that? Or is it something even more toxic? Some of these things break down into more toxic materials.

AN UNIDENTIFIED SPEAKER: *That it has even been found there, though, I don't think so. Do you have any evidence of the gas material? I don't think so.*

DAVID TENNIES: *They have evidence of tear gas.*

Material containing CS or tear gas was found at two locations (former Landfill (SWMU #2), and SWMU #9 (Burn area 18) at the Facility. Neither mustard gas nor nerve gas has even been detected at the site. CS is insoluble in water and very persistent in the environment, thus, it breaks down very slowly in the environment. Although CS-containing material is known to exist in two areas, CS itself has never been detected in soil and water samples. Thus, CS-containing materials (canisters and filters) will be segregated and removed from the Facility. Depending upon the quantity of CS recovered, this material will be disposed of offsite either in a Class II Landfill or in a permitted offsite incinerator.

MR. SENG: *Sir, can you wait until he finishes making the comment. And if you want to make a comment, then you can comment, make a comment. Thanks.*

MR. TENNIES: *When we talked two years ago, I got the impression that the levels of radiation available from the depleted uranium are quite low. I would like to see the data on what the detectable levels of gamma, beta and alpha radiation are at the site in various locations.*

The cleanup of depleted uranium at the Facility based on radioactivity is under the jurisdiction of the Department of Health Services, Radiologic Health Branch. There are two reports describing the cleanup of the depleted uranium. One report, dated April 1993, documents the results of cleanup taking place during 1992. The other report, dated February 1996, is a workplan describing the final cleanup activities needed to fully decommission the facility. Please contact the DHS project manager, Mr. Jeff Wong, at (510) 540-2360, for information regarding the radioactive properties of depleted uranium.

Has there been any Prop. 65 health risk assessments? And I certainly haven't seen any announcement in the paper of any Prop. 65 notices through the community. Now that this stuff is exposed, we do have Prop. 65 concerns.

Community notification of exposure to chemicals is required by Proposition 65 if any of the chemicals specified in this law are present in concentrations at the facility that pose greater than a 1×10^{-5} cancer risk. The chemical that is the main risk driver at the site, RDX, is not listed under Proposition 65, and neither lead nor dioxin are present in concentrations that exceed a 1×10^{-5} cancer risk. Nonetheless, DTSC has requested, and Aerojet has agreed to post Proposition 65 warning signs in order to better inform the community that concentrations of chemicals in soil at the Aerojet property exceed DTSC's required cleanup level 1×10^{-6} risk. These signs are present along Woodview Road as one drives toward the property.

It is important to note that “no significant risk levels” determination per Proposition 65 is based on the daily intake levels that would result in a cancer risk of no greater than one individual in 100,000 population (1E-05) exposed over a 70-year lifetime. The human health risk assessment in the RFI Report calculated a more conservative cancer risks of one potential case of cancer in 1,000,000 individuals (1E-06) exposed over a 70-year lifetime. Through this risk assessment, four chemicals were found at levels exceeding 1E-06 cancer risk or a hazard index of 1. The four chemicals were RDX, 1,3,5-TNB, dioxin, and lead. However, as noted above, the concentrations of these compounds and the calculated risk of cancer associated with each does not trigger Proposition 65 community notification.

If you are going to do ground water sampling, are you going to pull dual samples and have the DTSC run those samples through your own lab? And what are the contaminants you are looking for in that ground water? I understand that the ground water you are looking at is sort of a dead-end little area that doesn't have any outlets; is that correct? That's what we talked about two years ago.

MR. SENG: *Based on the information that we have to date, that is correct.*

MR. TENNIES: *Okay. So are you going to pull dual samples on that?*

MR. SENG: *The plan for the Department is to do oversight. And as part of the oversight, what we do is to take samples also to our lab so that we can also be able to do confirmation. So that is -- that will be the plan I would say at this stage.*

As reported earlier, the contaminants found in groundwater include explosive compounds (RDX, HMX and others) beneath the Redwater Pond and perchlorate in the Upper A-12 Test Area. The impacted water is localized and does not appear to be migrating away from the source area. Impacted soil and groundwater at 35 feet deep at the Redwater Pond will be removed as part of the cleanup. The groundwater at 58 feet deep beneath the Redwater Pond and at the Upper A-12 Test Area will be further sampled as part of the additional work that DTSC is requiring Aerojet to perform. DTSC will collect split (duplicate) samples from the borings and monitor wells and have the samples analyzed at its own laboratory in Berkeley, California.

MR. TENNIES: *When you go into the cleanup and remediation stage, is there an option for members of the community to also be involved in that as oversight? There may be some of us that may have actually some knowledge and experience in this area and they may be of some value as community members to at least have some oversight of what is happening up there to at least give us some confidence of what is happening as the right kind of affect.*

DTSC does not have the authority to allow private individual access the remedial operations conducted at private facilities, such as Aerojet. The decision to allow private individuals on the site is Aerojet's only.

MR. SENG: *Thank you very much. Number one, you helped me earlier with the maps. That was very good. I would like to, in terms of the analysis of the ill affects, the Department has toxicologists who are part that reveal the work that is going to be done and order decisions that are going to be made regarding this facility. The Department contains a large staff of toxicologists to review this information. And we, you know, and everything that has been reviewed by the Department is also*

being reviewed, you know, also by the Department of Toxicology. They are part of the team that reviews that information, and that will continue until the end of the project.

MR. TENNIES: *One last question I had, and one of my neighbors brought this up. When you are doing the cleanup, are there going to be airborne monitors set up to monitor what is happening with the dust associated with this cleanup? It is certainly easy enough to do that.*

MR. SENGA: *I imagine that should be easy to do, so we will look into that.*

MR. TENNIES: *Yes, we will have those airborne monitors? Is that a commitment?*

MR. SENGA: *The answer is yes and that is a commitment.*

As stated in Section II of this Response to Comments, air monitoring for dust will be conducted during the implementation of the Corrective Measures. Excavation of contaminated materials and soil sifting activities will cease if dust levels exceed 10 mg/m³ and if wind speeds exceed 25 miles per hour.

MS. TAMOUSH: *The next speaker is Chris P-i-o-n-k-e. While that person is coming forward, let me remind you that we have, we have gone through about a quarter of the questions so far, and I'm thinking you probably would not like to have a break this evening; is that right?*

THE AUDIENCE: *We would like to keep going.*

MS. TAMOUSH: *So, if anyone feels that their question has been answered at some point and if you would prefer to pass, just say so when I call your name. It might be an option if you want to do that. But you are more than welcome to ask a question, even if it has been covered.*

MR. SENGA: *I am going to be here until the last person leaves to make sure that I get your comments.*

CHRIS PIONKE: *All right. In your presentation you said that there are different types of explosive chemicals. You said TNT was one of them. Was there any dynamite found at the site? Inside the buildings? Outside the buildings? Anywhere near that?*

MR. SENGA: *Okay. I am not aware of that information, but that is something we will check into that and then that will be part of -- I will respond to that as part of my response to the comments.*

Dynamite was not used at the site and no dynamite has been found to date. Dynamite is unstable and unreliable, and thus a poor explosive to use in military applications. Dynamite was used primarily in the mining industry years ago but was abandoned for stronger, more reliable explosives. Its current use is very limited.

CHRIS PIONKE: *Okay. Because that was leading to my question. My dad was in the military and he told me that when dynamite sweats, it sweats nitroglycerin. And the longer it sits there, the more it sweats. And the more it sweats, the more nitroglycerin comes out. If that is ever hit or barely even touched, it could cause an explosion. What I am asking is if there is an explosion, could that set off other chemicals that will release them into the air, and would that bother the rest of the area surrounding that?*

I live maybe three or four miles from that area. Most of these people live that close to this area. But we are that close to this Aerojet site. And if there is all these chemicals and there is all these explosives, if that ever goes off, where will we be? We will probably be wiped out because of these things sitting in the ground. If they are combined and they cause an explosion, we could become wiped off the face of the map. Is there any prevention for that?

MR. SENGA: *Thanks for the comment. Again, the reason why we are here is to talk about the proposed cleanup for the site. And what we intend to do is obviously to make sure that those kinds of materials are not staying at the site and they are going to be taken care of so that people like you and the rest of the community, all of us, are not going to be -- our health is not going to be affected by that?*

The unexploded ordnance that has been found in the soil (and that was tested at the facility) is primarily small caliber (25 mm and 30 mm rounds, and several types of fuzes). Detonation of an ordnance item of this nature would injure personnel in close proximity to the detonation but would not affect the off site community.

Unexploded ordnance (UXO) collected during the ordnance sweeps is stored in a bunker that meets Department of Defense (DOD) standards. The C-4 plastic explosive at the facility (used in detonation of UXO) is also stored in a bunker that meets DOD standards and is stored in accordance with a permit issued by the San Bernardino County Sheriff's Department. The amount of explosives stored in these bunkers is small enough that a detonation occurring in one of the bunkers would damage the bunker but would not affect the off site community.

An explosion of the magnitude of the building that blew up in the 1970's could not occur at the facility today because there are simply not enough explosive materials presently stored at the facility to cause such a large explosion.

The detonations conducted as part of the Corrective Measures are limited to 10 pound shots (10 pounds net explosive weight); this amount of explosive is not large enough to cause an impact beyond the immediate vicinity of Area 16. Please see the response to General Comment 9 and the response to comments made by Ms. Judy Morton (question # 16) on page 68 of this Response to Comments for further information.

MR. PIONKE: *Okay. You are saying that in charge of the cleanup?*

MR. SENGA: *Yes.*

MR. PIONKE: *What if by chance something like that is buried? You guys are taking something up with a bulldozer, you hit it, explosion, who is responsible for that?*

MR. SENGA: *That's a good comment.*

MR. PIONKE: *That's all you have said to all these questions. I'm sorry. I just want a real answer.*

MR. SENGA: *Again, tonight, this is -- let me clarify one thing. The purpose of tonight's hearing is really to get your comments. As I said earlier, clarification, comments, those comments that I can be able to clarify, we can answer those comments. But we need to make sure that we provide you with the right information and the correct information. The reason why we have a court reporter here is to insure that that information is properly recorded and you can get the proper answers and the right*

answer to your question. So, that's -- you know, again, tonight, the purpose of tonight is really to get your comments, your comments, excuse me.

Every precaution will be taken while implementing the Corrective Measures. Neither DTSC nor Aerojet wants to risk injuries or death due to carelessness. To ensure the safety of field personnel, a site specific Health and Safety Plan has been compiled and will be implemented during site activities. According to the site Health and Safety plan, if an area potentially containing ordnance needs to be excavated, ordnance sweeps and clearance of any ordnance found will be conducted prior to the earth moving activity.

As stated in Section II of this Response to Comments, DTSC is requiring Aerojet to submit a long term Operation and Maintenance Plan which includes the requirement that Aerojet make an ordnance officer available to all future construction contractors in the event that an ordnance item is encountered.

MR. PIONKE: *All right. And I have one more question. Is there going to be any test in the creek that runs behind Autumn Avenue and Mayberry? Because a lot of my friends, they are younger than I am, and they play down in that creek. I just want to make sure that none of them will ever be harmed.*

MR. SENGA: *Okay. Thank you for the comment. We are going -- again, I cannot give you an answer at the moment, but that's a very good comment. And we definitely are going to take that comment and research it and a response will be provided at the end of the comment period once all the comments have been analyzed and --*

Offsite soil samples were collected in the two drainage pathways exiting the Aerojet Facility towards the north as requested by the residents. No chemicals of concern were detected in any of the samples. Please see the response to General Comment 7 for further information.

MR. PIONKE: *All right. When you guys are done finding out all this information, are you going to send a flyer, pamphlet, or something to every single house notifying that our friends are going to be safe, our families are going to be safe? Can you please send all that information to every single household in Chino Hills so we know what is going on?*

MR. SENGA: *The Department maintains a mailing list for the areas surrounding the Chino Hills proximity. The people who are in this audience tonight, and many others who could not show up tonight, did receive an announcement and a flyer regarding this meeting. The people that make comments today will receive a copy of the response to the comments once that is done.*

MR. PIONKE: *Okay. Only the people who are making comments are getting that?*

MR. SENGA: *A copy of the response will also be provided in the report in the repository at the library for those who may not be here and did not make a comment and would like to read about it.*

MR. PIONKE: *Okay. Thank you.*

MS. TAMOUSH: *The next speaker is Dick Ridinger.*

MR. RIDINGER: *I will be very brief. I am very concerned about the underground water. And one aspect that has not been addressed is it is fine right now. What happens when we have an earthquake? Chino Hills is a bowl of jelly. Like there is no rock formation or anything. If you have a nice earthquake, the water can go any place it wants.*

Please see the memo prepared by Mr. Paul Carpenter, DTSC geologist. This memo is included as Attachment D to this Response to Comments.

On your map I saw the streams. Leading to the southwesterly edge of the map you have they are headed down towards Orange County in through the State Park. Very little consideration has been given to the wildlife that uses that and what affect it has on them.

Two biological surveys were performed at the site, one in March 1996 and a second in April 1998. The results of these surveys are included as Appendix B of the RFI Report. In addition, ecological assessments were conducted to evaluate the effect of explosive chemicals detected at the Facility on the wildlife. These assessments are included as Appendix B of the RFI Addendum Report and demonstrate that the concentrations of explosive chemicals detected in soil and surface water do not pose a risk to ecological receptors.

It is nice to be a director or officer of a corporation where they can do criminal acts and hide behind the shield of a corporation where they cannot be individually held responsible. It has been criminal for Aerojet to let these toxins go out of hand and into the streams and waterbeds and into the ground, etcetera.

DTSC has found no evidence during the site investigation that Aerojet has committed criminal acts with respect to environmental laws at the Chino Hills facility. As documented in the RFI Report and RFI Addendum Report, there is no evidence of chemicals leaving the site at concentrations that pose a risk to human health or the environment.

I am also concerned about the future of dust that will be generated by the cleanup. I don't know what period of time it is going to take, six months, two years, ten years to clean up. Also the noise pollution caused by that. All the equipment usually starts working much earlier than when I get out of bed. Thank you for coming.

DTSC understands your concern regarding noise from remedial activities. However, it will ultimately benefit the community to remediate the site. The implementation of remedial measures is expected to take several months to complete. Please see the response to General Comment 8 for further information regarding the schedule. Off road vehicles will be needed to perform the remedial activities; however, the noise performance standards for City of Chino Hills will be followed. To minimize generation of dust, dust suppression methods, including water, will be used. Air monitoring for dust will be conducted and excavation activities involving contaminated materials will cease if ambient dust levels exceed 10 mg/m³. Excavation activities will also cease if the wind speed exceeds 25 mph. Please see Section II for further information regarding the engineering and administrative controls required for the Corrective Measures.

STEVEN HOOD: *May I reinforce one of his comments? The shifting of the underground aquifers during an earthquake is very, very real. Several of the hot springs that used to be active in the Sleepy Hollow area, in the Long Beach area in the mid-thirties became inactive and they have become a*

pocket type of stream or a pocket ground aquifer where it would not have runoff into another area. And he said this can change in a heartbeat. So we do need to have a very real concern.

Please see the response to your earlier comment on page 114 and the memo prepared by Mr. Paul Carpenter, DTSC geologist. This memo is included as Attachment D of this Response to Comments.

MR. SENGA: *Thank you. Can you please state your name for the record so that –*

STEVEN HOOD: *Yeah, Steven Hood, H-o-o-d.*

MR. SENGA: *Thank you.*

MS. TAMOUSH: *The next speaker is L. Tillema, T-i-l-l-e-m-a. And the questions are written here. Would that person like those questions asked in response, or did you want to repeat them here? Is that person still here? Okay. We will enter them into the response to comments. The next speaker is Karen Crampton.*

DTSC apologizes that we do not have the specific comments provided by Leslie Tillema. However, we have included DTSC responses to General Comments in Section IV of this Response to Comments.

KAREN CRAMPTON: *I have been a resident here for 18 years. I was eight months pregnant with my son when I moved out here. We first thought the rumblings on a weekly basis were sonic booms and later came to realize it was Aerojet setting off those ordnance's. Interesting to hear the comments by other long-term residents here of health problems. I thought we were the only family that has them.*

My main concern is the removal of and the cleanup. You are talking about the bulldozers and all of that has been commented on. But, we, like they said, the heavy machinery. But the trucks going in and out, as we all saw on the map and we all know because we live there, there is one road in and out. Are they going to be coming across Peyton Drive?

No. The approved transportation route follows Woodview Road to Pipeline Lane to Soquel Canyon Drive, then enters the 71 Expressway. A copy of the truck route is included with the Initial Study and is also included as Attachment I to this Response to Comments.

What kind of steel containers are they going to be in? If any of us followed even behind the large trucks that haul soil that have the containers, you always see little tiny particles of dirt falling out. So what kind of sealed containers are these going to be in? You are taking the contaminated soil and moving it from one place right through the residents that are -- that have been contaminated to begin with. You are taking awful stuff and moving it through again. Is it cleaned there and then moved? Or is it moved and then cleaned? Or what is the process? Do you have a response to that tonight or is that going to be in the written comments as well?

MR. SENGA: *Let me make a clarification on that, and the Project Manager, Christine Brown, will do that.*

MS. BROWN: *The trucks will come down Woodview Road down Peyton and out to the 71. The soil will be containerized. By that I mean the design of the truck will be such that soil will not escape out the sides. The soil will not be cleaned on site. It will be dug and placed into the truck and then the truck will take the soil to an approved treatment storage or disposal facility that handles hazardous waste.*

Please see Section II and the Conditions of approval for Corrective Measures (included as Attachment B) for further information regarding the transport of the contaminated soil in trucks.

MS. CRAMPTON: *If I may make one more comment? Can I make a clarification? Can I ask a question?*

MR. SENGA: *Can you please come to the microphone and state your name for the record?*

AN UNIDENTIFIED SPEAKER: *I just want to know when they go down 71, are they going to the 91 or to the 10, for those of us who live in the other parts of Chino Hills? Because I live off the 71. And I want to know if it goes past my house or not.*

MR. SENGA: *I do not know because that obviously depends on where the material will go.*

AN UNIDENTIFIED SPEAKER: *So you just can't answer that?*

MR. SENGA: *No, I can't answer that.*

Once the trucks enter the 71 Expressway, the drivers could go either way depending on the final treatment or disposal destination.

KAREN CRAMPTON: *I do want to make a comment in regards to our weather here and that prevailing breeze as well as the repeated fires that these hills have on a regular basis. If you don't know of those, you need to be aware of them. I highly suggest you do not do this during the summer, that you do -- well, I can't say that because I don't know. But do consider our weather, our climate, the prevailing winds, and the fact that we have repeated fires that burn. And most of the time the wind is coming from the west to the east and it is going to blow those contaminants right at us. Thank you.*

MR. SENGA: *Thank you.*

Due to the earth moving operations required for the project, it is not feasible to perform the Corrective Measures during the rainy season. There are several administrative and engineering controls described in Section II of this Response to Comments and the Corrective Measures Workplan which minimize dust generation and risk of fire from detonation. These include stopping work on windy days (winds in excess of 25 mph), air monitoring for dust and stopping work if dust levels exceed allowable levels, and use of dust suppressing measures including water to minimize dust generation. In addition, detonations will only be performed on days approved by the Chino Valley Fire Department, which takes into account fire risks. On site fire-fighting equipment is available and adequate to provide first response in the event of a fire.

MS. TAMOUSH: *The next speaker is Carol Dobrikin.*

CAROL DOBRIKIN: *Now, first of all I want to do a little explaining. A little apology. Part of the reason many of us are so stressed out is because there seems to be a rush to build roof tops in an area that many of us feel is costlier than a genetic time bomb with long term affects where the women are getting epidemics of breast cancer. All this is new information that does not seem to be addressed by the stuff that I have been able to find in the library and in City Hall.*

As mentioned in the response to General Comment 2, the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center evaluated the instances of childhood and adult cancer cases in the Chino Hills area. The report indicated that there was no increased cancer rate in either children or adults.

Now, I do want to thank you for making this information available. Before we incorporated as a city, when we were in county jurisdiction, a lot of this was done and we didn't know what was happening and before we were a very informed community. Because we have recently incorporated, when was it, '93, and it has been a whole different ball game out here since we now have more local control and more local interest.

Now, I have three questions for you about three subjects. One of them seems to have been pretty well covered, so I'll just very briefly express my concerns. And that's the airborne. This is a fire corridor and a wind corridor to the back end, the other side going from the back end of Aerojet site through Soquel Canyon into Brea. And that was supposed to have been the site of the back end of Soquel Canyon Road which was removed from the map from the general plan as one of the major circulation arteries. That's why I was concerned about geography.

DTSC is requiring several administrative and engineering controls as described in Section II of this Response to Comments which minimize dust generation and risk of fire from detonation. These include stopping work on windy days (winds in excess of 25 mph), air monitoring for dust and stopping work if dust exceeds the allowable levels, and use of dust suppressing measures including water to minimize dust generation. The Corrective Measures Workplan describes the provisions Aerojet will take to minimize the risk of fire during the implementation of the Corrective Measures. In addition, detonations will be performed accordance with the requirements of the Chino Valley Fire Department to minimize the risk of fire occurring during this operation.

Now, access to the Soquel and 35 acre Soquel aquifer, Soquel, that site, and the other side of Aerojet Hill from Soquel Canyon stream which runs down towards the 71. Now, I don't see anything in that, in what I have been able to read so far. And that's going to be one of my questions, is it was good of you to make one copy available to the library and one copy available to City Hall. But we happen to have a really good library. One of the most used ones, and indeed one of the few in the area that is even open on Sundays. However, as good as this is, if we could have more than one reference copy in the library, our librarians will be willing to check them out on a one-week basis, on as a paper -- as a document file instead of three weeks like you check out a book. Some of us have actually gone through four inches of the seven volumes that are in the library. And the one that I was looking at today is different from the other one that I saw. So there is a lot of material to go through.

The hydrogeology beneath the site is described in Section 3 of the RFI Report and in the memo prepared by Paul Carpenter, DTSC geologist. This memo is included as Attachment D of this Response to Comments.

Per the public's request, a second set of the RFI documents was provided to the Chino Hills library.

The other thing I would like to ask, is there any way to keep the door open a little longer for us to give you input, especially if it isn't possible for us to get money for an independent study? You will need this before you make a decision.

Per request by City of Chino Hills community and the city council members, the public comment period was extended until June 30, 1999

Now, the other question I had was -- I had three questions: One about water, one about air, and then the biggest one is about geography. And that's why I was concerned when you put up that map. Now, I have been here since 1970, not quite as long as Aerojet. And we hiked down from behind my house in Carbon Canyon to the old Aerojet dump site. Used to be a fascinating place to go down, all the stuff that was there, the hardware was, you know, really fun to pick through and watch. But there is also some blue line streams down there and that I know haven't been looked at and they are now talking of putting a toll road through the state park down in through Soquel Canyon to cover the back end of Soquel -- of the Aerojet site. Now, my concern is whether the information or misinformation or missing information or wrong geography, where did you get this from and what do we have to do to see that you get the correct geography so that you really know what is happening?

The geography and regional information was obtained from the U.S. Geologic Survey's Yorba Linda and Prado Dam 7.5 Minute Quadrangle maps

As part of the Aerojet remediation project, impact to ecological receptors and habitats, including blue-line stream was evaluated. The remedial project was designed to have minimal impact, if any, on these sensitive areas and, as a result of remedial measures, some of the impacted areas will actually be restored

DTSC encourages members of the community to speak with DTSC project staff individually to discuss any specific concerns you may have.

Now, on the other side of my side of the Aerojet Mountain, the soils there tend to have a very high liquefaction factor. The geology is totally different and nobody is looking at that. So you are -- that area also -- I know we are not supposed to talk about zoning, but that area traditionally has been zoned for one on 20 acres, when it was counting, then it was taken over by the city and released to one on five acres. Now they want to do cluster development, which means if you have four hundred acres, you can put one per five acres in one cluster, means you have to tear up all of that stuff. How airborne? And then, very quickly, I will just summarize. It might have been better, if this is such a time bomb, to leave it like fallow for a certain number of years so we know what the affects are before we cover it with roof tops.

The purpose of the Corrective Action at Aerojet is to remediate the contamination resulting from the facility's operations. DTSC does not have jurisdiction over future development scenarios, zoning regulations, or the City's proposed transportation routes. DTSC is committed to ensuring that the site is properly evaluated, investigated and restored for future use.

And the other thing is how do we get information to you and from you about what has been going on? I think there is stuff that you need to know that you are not being given, and we would -- how do we remedy all of this communication? Where if you have been given information by the county before we incorporated, or by the city, or by Aerojet, and then everything falls through the cracks because you don't really know which ends of what you are looking. So the geography is really critical.

MR. SENGA: *Thank you very much. Okay. As far as how you can provide us information, our telephone number, our information is part of the -- is on the fact sheet. It is also on the announcement and the handouts out here. If you would have the information to address, the telephone number, and who to contact in terms of providing the information, I am the person that you will be sending the information. I am with the Department of Toxic Substances Control. My address is in Glendale and it is on the paper. I will be happy to give that to you.*

MS. TAMOUSH: *It is on the fact sheet and it is also in your packet.*

CAROL DOBRIKIN: *No, I have that number. That's not my concern. My concern is how do I get information from you about who put information that is incorrect in those seven volumes in the library and the two volumes here? There is just so many incongruities and so much that is literally wrong that, or incomplete or unclear, that how do you get clarification for us and how do we get clarification to you? So there needs to be much more communication.*

As mentioned earlier, DTSC encourages community members to speak with the DTSC project staff to discuss your specific concerns at any time.

And is there any way to extend the time line so that we have more time to work on this so that we come up with something that -- people are afraid. And there have been many rumors, incidentally, about higher rates of cancer. And also when they were doing some of the burning, that there was a lot of respiratory problems in the area. And I personally have talked to a current employee of Aerojet who says that in the Soquel Canyon area that you guys aren't even talking about, that they know that stuff has been dumped there for years that even the company doesn't know about it. And we have also had verbal reports from former employees that have also talked about that. And then the Champion Newspaper for years has talked about deaths, injuries, spills. And none of this do I see in any of these seven volumes, six inch thick reports, anywhere. So somehow information isn't being exchanged that needs to be. And how do we remedy this?

The public comment period was extended to June 30, 1999 in response to the community request.

The Desert Sierra Surveillance Program at Loma Linda Medical Center evaluated the occurrence of childhood and adult cancer in the Chino Hills area. The study reported that there was no increased rate of cancer in this area. Please see the response to General Comment 2 for further information.

DTSC has no evidence that Aerojet operations or disposal of hazardous waste has taken place along Soquel Canyon Creek or along the dirt road leading from the Landfill to Carbon Canyon road. However, DTSC is requiring Aerojet to inspect this area for ordnance to ensure that no ordnance is present, and to remove ordnance if any is found. Please see Section II of this Response to Comments for further information.

Occurrences of deaths or injuries to Aerojet workers are not related to the site investigation or corrective measures. With respect to spills of hazardous materials, DTSC would be willing to evaluate any additional evidence provided regarding additional potential releases of hazardous materials at the site.

MR. SENGA: *Okay. Again, if any one of you, and this is the reason why we came here is this.*

CAROL DOBRIKIN: *That's why I am asking the questions, yeah.*

MR. SENGA: *If you have information that can help the Department make the right decision for this site, please, submit it to us.*

DICK RIDINGER: *Woodview used to be Soquel Canyon a few years ago. They changed the name from Soquel -- from Soquel to Woodview.*

The RFI Report and RFI Addendum Report acknowledge this fact.

MR. SENGA: *That's good information. Can you please state your name?*

DICK RIDINGER: *My name is Dick Ridinger.*

MR. SENGA: *Okay. Let the record show that a resident, and I am going to assume you are a resident.*

MR. RIDINGER: *I live right behind the stream.*

MR. SENGA: *Okay. A resident of Chino Hills has said that Soquel Canyon was changed to Woodview. So -- Okay. Thank you very much. It is always nice to have the, you know, the members of the community because some of these things here obviously we would not have known. But this is good information. We appreciate that.*

MS. TAMOUSH: *Ma'am, you are welcome to come up again if you want to say something else. You want another card?*

CAROL DOBRIKIN: *Yes, please.*

MS. TAMOUSH: *The next speaker is Ron Pesante.*

MR. PESANTE: *I am a former employee of the Aerojet Company. I am not here representing the company. I have a son that lives down the street that is more concerned than anything else. I feel a lot of the questions that people have tonight could be answered very simply if there were facts available. And there are facts available. And I will cite some cases. I would like to touch on just two things. One is the so-called gas problem that you are talking about.*

Let me go into the history a little bit. There was some nerve gas tested at Chino way back when in the seventies, which through Edgewood Arsenal we also had a similar test facility. It was an enclosed tank with constant pressure on the outside. Nothing ever got out of that tank, because if it did, it would have killed people working on it. That tank was disassembled some time ago. It was cut up

after being decontaminated several times. The material was shipped to the Fontana Steel Company and put in tureens. So the problem of nerve gas or any sort of gas I think is a no problem because it is not there. It is gone a long time ago.

If they find some tear gas streams, that is not a big problem. We have tear gas all the time. The police officers probably have some in their pocket. It is not a big thing, I don't think.

The other problem is the discussion of the depleted uranium. Depleted uranium is a very low level radioactive material. Few people know that when we fly, say from L.A. to the East Coast, they will get more radiation in that flight than they will from one of these penetrators that may be left at Aerojet. I doubt it. The testing was done out there. They fired the guns short range into a sand-filled container, and periodically that sand-filled container was evacuated and sent off for proper disposal. So the thought that there is DU laying around out there is highly, highly unlikely. And if it is, it is very low level. I did a lot of work on depleted uranium.

Other problems that people have concern for, I believe, should be answered by the Department. They should come up with data for the people, and I think a lot of the hysteria will go away. I think you have a very small contaminated area, only one section of the facility, at best. It may be in the earth. It can be taken out fairly easily.

The problem with ground water, I doubt very, very much Aerojet will have a huge problem on getting water for the facility. We tried wells years ago. We drilled, couldn't find anything. We eventually got our water down in the well up here just above this building down in the canyon, a long ways from the facility, because it was the only source we could find. The so-called stream you are talking about is a very limited stream, at best. There is no water there in the summertime at all. Very little water goes down in there except in a flashflood condition once in awhile.

AN UNIDENTIFIED SPEAKER: *It is all year round.*

AN UNIDENTIFIED SPEAKER: *Are you a resident or an employee?*

RON PESANTE: *I am not an employee. I am a retired employee of Aerojet. I am not representing Aerojet.*

AN UNIDENTIFIED SPEAKER: *Do you live in the vicinity?*

RON PESANTE: *No, my son does, down the street.*

AN UNIDENTIFIED SPEAKER: *I have water in the stream year round.*

RON PESANTE: *But that stream, sir, is not connected with that Aerojet property. The slope is way off on the other side.*

The speaker is correct. As reported in the RFI documents, the majority of surface water runoff is towards the southwest, away from Chino Hills. Normally, all the streams leaving the Aerojet site dry up in the summertime except after periods of abnormally high precipitation.

MR. SENG: *Sir, please, okay, if you want to make a comment, go ahead and make your comment and --*

RON PESANTE: *Well, that's why I think if you have a decent map and some pictures where the people can see what you are talking about, they would better understand what the problem really is.*

MR. SENGA: *Okay.*

RON PESANTE: *The slope of the stream, the facility where the testing was done was over the hill down the other way.*

MR. SENGA: *We can get maps and provide maps that will be -- that will clarify that part. We will do that.*

CYNTHIA SUNAGAWA: *I would like to make comment. My name is Cynthia Sunagawa. If the stream is not connected to the Aerojet property, then how did the grenade and the ammunition come into the stream?*

RON PESANTE: *The grenade and the ammunition had nothing to do with Aerojet, ma'am.*

Mr. Pesante is correct. As described in the response to comments made by Mr. Fred Sharp on page 111 of this Response to Comments, the grenade and ammunition are not from the Aerojet site.

MR. SENGA: *Excuse me, sir. If you want to make a comment, you will need to go back to complete a comment card so that you can come back and make a comment. But right now I want to make sure that everybody gets an opportunity to make a comment. Thanks.*

MS. TAMOUSH: *Next one is Judy Morton.*

JUDY MORTON: *Well, let's see. First I wanted to talk about the statement of basis, which is proposed remedial measures, and I wanted to read here. McLaren Hart identified remedial technologies as applicable for each of the listed contaminants identified at the facility, one, segregation, processing and removing; two, landfill disposal; three, in place cap and closure; four, incineration; five, long term absorption; and six, bioremediation. Okay. I had heard earlier that you were saying that there wasn't going to be incineration. Is this off the site or on the site? Or have you guys ruled out incineration now?*

MR. SENGA: *Okay. That proposal, before I got involved with this project, there was that proposal. That proposal was from the remedial action plan. It was not one of the ones that are proposed.*

In developing the Corrective Measures Workplan, the above mentioned technologies and processes were evaluated to determine which method best achieved the project goals. Through this evaluation, excavation of contaminated soil and transport off site by truck to a landfill was the best method due to implementability, cost and overall environmental benefit and protection (i.e. removal of contamination as opposed to leaving it on the site) and has therefore been selected as the corrective measures. Onsite incineration was ruled out.

JUDY MORTON: *Okay. Also from the readings, Aerojet had been burning for many years up there with an incinerator during the times that they were allowed. They got permits from the Air Quality Management District to keep those furnaces going to 1992. Okay. But just to let everybody know that there were burnings going up there of waste where, you know, we were supposed to stop at a certain point when we found out it was bad to burn our stuff up in the air.*

DTSC acknowledges your concern regarding the adverse human health effect of hazardous air pollution. The air quality in the Los Angeles Air Basin and in communities east of the basin has long been the

focus of both national and state regulations designed to improve the air quality. Indeed, the air quality in the basin has shown significant improvement over the last 10 years. Since regulations are developed based on scientific research, impacts to the regulated industry as well as impacts on public health, improvement of air quality is achieved in small increments over a period of time. As part of the requirements for implementation of Corrective Action, DTSC requires facilities to adhere to all applicable regulations set by the South Coast Air Quality Management district and, in some cases, goes beyond what the law requires in order to better protect human health and the environment.

I have a concern about the covered vehicles. I would like to make sure that they were sealed covered vehicles, not just tarps. I had witnessed tarps coming down from the hill with about 200 loads of contaminated material that were radioactive. And I noticed that the tarps were flapping in the wind. Because the contractors had tarps that they didn't want to pay and get the straps fixed. So I had been sneezing for a couple of days. Well, you know, I had been inhaling that. So it is right behind my house. Woodview goes right behind my house and I was inhaling it. I was really upset. I talked to the city. I talked to Don Vanderkar. And I would like to make sure that we don't have this happen ever again. I want to rule out any contractor's position in their life that they can choose not to buy that tarp. I want a sealed container and I think everyone here would agree with me.

Please see Section II and the Conditions of Approval (included as Attachment B to this Response to Comments) for information regarding transport of contaminated soil in trucks.

JUDY MORTON: *Also I would like the water up there that comes down toward us and also flows in the other direction too, I would like the water tested before, during and after the cleanup site. I want to make sure that that water is clean before we go in there, clean it up during the process. Because that's going to be runoff that is going to come down into the homes. And we need to make sure that that stays clean and we are not affected by that. Because everybody has these streams. We have these great habitats running behind our homes and, you know, it is like those streams are running back there. And it is so pretty. But what is in the water? We need to know. We need to check it. It goes all the way to Los Serranos Lake. We need to check that too because that's where all the runoff goes to through the years. It is going to have a buildup factor. Arsenic has a buildup factor. Lots of chemicals and contaminants have a buildup factor. And that's where it has all gone. So we can rule out the possibility all along the way.*

Surface and subsurface water at a number of locations on the Facility and 4 locations off site were sampled for the chemicals of concern. Sampling of several surface water locations on the site revealed relatively low concentrations of RDX and HMX and perchlorate. This surface water runs down the hill to the southwest to Soquel Canyon Creek, and thus is on the other side of the hill from Woodview Creek and Woodview Road. The facility operations, including the test ranges, were located on this same south slope. The concentrations of explosive chemicals and perchlorate in surface water were evaluated in the Health Risk Assessment and were demonstrated not to pose an adverse effect on human health or wildlife. In addition to the on site sampling, two drainages on the north slope of the ridge in the vicinity of Woodview Creek (See RFI Addendum Report, Figure 6-1) were sampled on October 8, 1997 for chemical agents, explosive chemicals, CS (tear gas). Sampling results revealed that no contamination was present in these drainages, indicating that the contamination has not migrated off site to the north. The sampling results for these drainages are included as Attachment G, and the surface water sampling

results are summarized in the response to General Comment 7. The surface water sampling results are documented in the RFI Addendum Report, Sections 3 and 6.

Please see the response to comments made by Ms. Marjorie Mikels on page 30 of this Response to Comments for information regarding testing of Lake Los Serranos.

Sampling results for testing of groundwater in wells both on and off site are summarized in the response to General Comment 7 and documented in the RFI Addendum Report.

Also I would like to state that there is a possibility for areas of concern that have not been identified. Okay. There is not necessarily every place that has had the contaminants or the depleted uranium shells been identified. We cannot rule out the fact for error, human error. That means that there might be individuals that have deposited the contaminants in places we don't know about. In 41 years, 50 years up there, there are people that have worked there that can't be identified, that can't be located. And there is no way of telling of what has gone on the whole entire time. So I would like to put that in the record that we cannot be sure that every place will be clear.

DTSC acknowledges the fact that there is always a possibility that locations exist on the site that have not yet been identified. However, DTSC believes this possibility is low based on our review of the sampling data and site history information provided in the workplans and reports documenting the site investigation, and with the additional work we are requiring Aerojet to perform, and DTSC's additional review of the ordnance detection and removal activities and depleted uranium levels at the site. Please see Section II for further information.

Also, surface sweeps. As far as the area that is swept, I notice that the green area is the area that is going to be swept for depleted uranium shells. I would like to state that in San Diego at the Terra Santa site, there were boys killed by finding ammunition there. I would like to read an article from the situation that happened there (Reading:) "Two boys were killed instantly and a third was injured yesterday afternoon in Terra Santa where a World War II vintage artillery shell that they had been playing with exploded, authorities said. The ordnance, which witnesses said exploded with tremendous force, peppered all three youngsters with chards of deadly shrapnel severing the legs of one of the dead boys and causing mortal head wounds to the other. The dead children were identified" and it goes on to talk about them.

Depleted uranium (DU) projectiles do not contain any explosive material and thus do not blow up. The green area you are referring to is the OB/OD area, and DU shells were never tested in that area and thus are not present there. The accident that happened at the Tierra Santa community in the early 1980s was indeed tragic. It was because of this incident that ordnance sweeping activities were reevaluated, modified, and rewritten to provide a more systematic and better documented approach to clearing UXO. As mentioned in Section II, DTSC is continuing to evaluate the detection and removal activities for UXO at the facility

But that was an area that was a buffer zone too. They built homes there. They put people there. They thought it was cleaned up. And the area -- nowadays we cannot be sure that these areas are clean. You can say there is error, so it could happen. We could go out there and start digging. Like the

neighbors down on Bayberry found a hand grenade that had to be detonated by a bomb squad, okay. How many of these are we going to find in the future? How many of these are we going to come up against? And we need to make sure that that doesn't happen to our children. And we need to make sure of that. And there is no way, unless you comb the surrounding buffer areas, not just the Aerojet area, and make sure that the area is safe, okay. And --

When the McCulloch base was closed down, military EOD technicians performed surface sweeps of the facility prior to the Army deeding the land to the city of San Diego. Surface sweeps at that time detected items to depths of only a few inches. Limited surface sweeps conducted by the military were in response to the city's plan for the site to remain open, undeveloped range. Reportedly, the military informed the city that the property could not be developed for residential use without additional ordnance sweep and removal activities. With time and reportedly as the result of financial problems, the city sold the property for development without disclosing the prior history and need for addition subsurface ordnance sweeps. After it was developed, the accident occurred.

All areas at Aerojet site, including the buffer zones, where UXO is suspected have been or will be swept for ordnance. The sweeps followed a systematic approach, beginning at the impact or disposal areas and radiating outward until an area free of UXO was established. Sweeps then continued an additional 100 feet for final confirmation that the zone of UXO influence around any UXO concern area at the Facility was defined and swept

DTSC's proposed cleanup goal for ordnance contamination is future residential land use, and we are in the process of developing residential performance standards for cleanup of UXO. We will have these standards in place prior to termination of Corrective Action, and will evaluate the cleanup of UXO at Aerojet in light of these standards. If the results of our evaluation reveal that the ordnance detection and removal activities do not meet our standards for future residential land use, Aerojet will have the option of performing additional ordnance removal activities or considering an alternate land use. The public will have an opportunity to formally comment on our land use decision based on the standards along with the results of the continuing ordnance sweep activities prior to termination of Corrective Action.

Because present day ordnance detection methods cannot guarantee that all ordnance items have been removed from an area, DTSC is requiring Aerojet to submit a Long Term Operation and Maintenance Plan to ensure ongoing protection of human health and the environment with respect to ordnance. Please see Section II and the Conditions of Approval for Corrective Measures, included as Attachment B, for further information.

MS. TAMOUSH: *That is five minutes. Would you like to do another card?*

SCOTT MORTON: *She can have my five minutes, Scott Morton.*

MS. TAMOUSH: *Okay.*

JUDY MORTON: *Okay. And then also what I am worried about is if cleaning up the field dirt involves bulldozing, putting dirt in trucks, all that kind of stuff, it is going to kick up a lot of dust for us to inhale down the way. There was talk about dust monitors, monitoring the dust to making sure what we are getting polluted by. I would like those monitors to make sure they were actually detecting something to the levels that would affect us. Also, the monitors need to be aware of all the chemicals,*

okay. I understand that certain monitors only monitor for certain chemicals, okay. There are also known unknown chemicals up there that have been classified that we do not know what is up there. And I would like to say that if we don't know what the chemicals are up there, how can we say that the area is safe?

As mentioned in Section II, the Corrective Measures workplan includes several administrative and engineering controls for minimizing dust generation. Dust suppression using a light water spray will be implemented. Air monitoring for dust during excavation of chemically contaminated soil and CS (tear gas) containing material, and during soil sifting activities will be conducted. If ambient dust levels exceed 10 mg/m³, excavation work will cease. In addition, soil excavation activities will not be performed if wind speeds exceed 25 mph. The Corrective Measures do not involve excavation or remedial work at AOC #11, Chemical Test Area, where unknown chemicals were reported to have been used.

For information on the classified chemicals that were tested at the facility, please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments.

The other thing is in the future we have just found out that perchlorate is a contaminating substance in our water, okay, in the last two years. Okay. In society, if we have just found this out in the last two years, logic would reason that in the future we are going to find out that there are other chemicals that are also contaminating that are up there. And people now have their homes up there. People are now living there. And we cannot declare it safe if we don't even know what those chemicals are at this point. But in the future we are going to go, "Oh, my gosh, that is so contaminated," just like the American River who they have got like five thousand particles per million of perchlorate in the water now. But nobody knew it and they were declared safe. So all these people were drinking it. And we are going to come down the road five years from now and say, "Oh, but we thought it was safe." And so I would like to make sure that that area is safe, if it can ever be declared safe. I think that is just in theory. So we really need to evaluate what is considered safe and we need to really take that into consideration. And basically those are my statements.

DTSC acknowledges that there is always the possibility that scientific research may find new chemicals with adverse impacts on human health or find new dangers associated with known chemicals. However, DTSC must base its clean up requirement decisions on established scientific facts and information available to date. Based on information provided in the RFI Workplans, the RFI Report and RFI Addendum Report, and on our additional review of ordnance detection and removal activities and depleted uranium, we believe that the constituents of concern at the facility have been adequately identified, and that the proposed remedy will adequately address the contamination at the facility. If the results of our review of ordnance removal and depleted uranium levels at the facility require additional remedial measures, the public will have a formal opportunity to comment on these measures prior to their implementation

MR. SENGA: *Thank you very much. I would like to just acknowledge the fact that Judy, at the beginning of this work, Judy did provide to the Department written comments. And I have to say that they were very, very helpful in the work that we had done. And I want to say thanks.*

MS. TAMOUSH: *A previous speaker, Susan Steinseifer. Did you want to go forward? Or maybe she*

is not here. Sunil Shah.

SUNIL SHAH: *My question has already been asked by the gentleman over here in the back. But the question was on air quality and monitoring of air quality, and your answer was that --*

MR. SENGA: *Yes.*

SUNIL SHAH: *-- yes, you are going to do it.*

MR. SENGA: *Yes.*

SUNIL SHAH: *I just need clarification. Is it going to be your Department that is going to do it, or are you going to be hiring an air quality specialist or an agency that specializes in that?*

MR. SENGA: *The contractor for this site, you know, is one of the things we are going to be doing. We also have within our department people who will evaluate the result of that data.*

SUNIL SHAH: *So these results will be part of the soil and water testing?*

MR. SENGA: *Yes. All the -- yes, that is correct. All of the data that is collected at the -- for the purpose of the cleanup and remediation of this site, the data will be evaluated by the department.*

SUNIL SHAH: *Okay. Thank you.*

Please see Section II for a description of the air monitoring that will be required by DTSC during the implementation of the Corrective Measures.

MS. TAMOUSH: *Next speaker is Jose Palomo.*

JOSE PALOMO: *First of all, good evening. And I am just addressing all my neighbors, friends and fellow neighbors that I have known for 21 years. My concern right now is when you were talking about the time release, it does not matter about the water. I think it should matter, because all of us drink the water, and we all do use water to cook our food and everything. And what my concern is this cleanup. Like we said, why wasn't it done when it was first found? And they should be testing the water for all the residents that knew, as well the old residents, because we don't know if we have been exposed already to that -- to that kind of water.*

City drinking water sources have not been impacted by activities conducted at the Facility. The aquifer in which the City of Chino Hills has municipal wells is located north and east of the 71 freeway, and is upgradient of the site. Thus, there is no potential for contaminated water sources at the Aerojet facility to impact the City of Chino Hills municipal wells. Please see the response to comments made by Ms Marjorie Mikels on pages 101-102 of this Response to Comments, and the response to General Comment 7 for further information.

My question would concern -- would be about the air quality. And if there would be some edification that we are permitted to breathe the air, if it is safe to go outside for our fellow children, as well as our neighbors. And why didn't they think of this a long time ago? Why did they put this off for so long? I think, you know, you are really putting a risk to all of us here. And that's the two main concerns I have and maybe you could answer that for me.

MR. SENGA: *Okay. I think -- let me clarify one thing here. When I said the time of release does not matter, what that means is that there is -- it doesn't matter when the material was released. They have to go and remediate the material. What it doesn't mean is that there is a time that we are going to say, well, this was released and at such and such a time, therefore it is not important, no. That is not what*

the time of release -- that's what that means. The other question about the air, as I said, we will be monitoring on that.

As stated in Section II, air monitoring will be conducted during implementation of Corrective Measures and the work will be stopped if wind conditions or dust exceed their respective limits.

In order for DTSC to approve the appropriate remedy for a site, we must follow procedures to identify the nature and extent of contamination at the facility prior to approving the remedy. We must also seek public input prior to approving the remedy, and consider the comments received prior to making the remedy decision. This process ensures that the remedy meets the needs, to the best extent possible, of all stakeholders involved.

The Health Risk Assessment demonstrated that present site conditions do not pose a health risk to the off site community. Please see the response to comments made by Mr. Andre Hernandez on page 21 of this Response to Comments, for further information.

JOSE PALOMO: *Okay. Are they going to be testing also the water for our neighbors, like below Aerojet? Because we could be exposed to that too because of the rains that we have had that could have washed down throughout the rains, you know. We need to check that. You know, I think that is a very concern to all of us. We need to test our water and see if there is any indication that we have been exposed to that. I have been a resident for about 21 plus years, and I am speaking for everybody here. And I am very sure they are concerned also, you know. Do you have any comment on that?*

MR. SENGA: *Yes. Let me just say this. As of today, as of this moment, I can say that based on the information that we have, we have collected a lot of data. And in terms of the water, the soil, and the air, the air and the soil and the ground water, there is no information at this moment that I can say that those pose any threat to the health of the community, based on the data that we have collected. As far as your kids being able to go outside and breathe the air, there is no information that we know of at this moment that I can say that they cannot do that. So I would say that the air is safe for your kids to go out and breathe.*

Please see the response to General comment 7 for a summary of the surface water and groundwater testing performed at the site.

JOSE PALOMO: *Okay. I am talking about the air qualities, when you are about to do your cleanup. Are you going to inform us that it is unsafe to go outside, that way we don't expose our fellow neighbors to breathe that unhealthy air when you guys are going to be cleaning up? Because there was mention earlier there might be winds and everything. And we need to know about this ahead of time, let's say if it is windy, so we don't get exposed to it. Or is there going to be some kind of warning about that?*

MR. SENGA: *That's a very good comment and I will check on that and any -- the purpose of the monitoring is to make sure that if there is any reason where we feel that the data from the monitoring shows that the community is at risk, yes, they will be notified and appropriate action will be taken.*

As mentioned in Section II, the Corrective Measures Workplan includes several administrative and engineering controls for minimizing dust generation. Dust suppression using a light water spray will be implemented. Air monitoring for dust during excavation of chemically contaminated soil and CS (tear gas) containing material, and during soil sifting activities will be conducted. If ambient dust levels exceed 10 mg/m^3 , excavation work will cease. In addition, soil excavation activities will not be performed if wind speeds exceed 25 mph. DTSC believes these provisions are adequate to protect the off site community from significant adverse health risks due to implementation of the Corrective Measures.

In response to public concerns, the public will be notified in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) of the time frame during which trucks carrying contaminated soil will be traveling from the facility to the 71 freeway. The truck route was included as figure 2 in the Initial Study and has been included in Attachment I of this Response to Comments. The public will also be notified in advance via the same means regarding detonation of unexploded ordnance.

MR. PALOMO: *Now, about the water quality? Is there any way we can test the water, you know, that we, you know, for the new as well as the old residents that live here in Chino Hills? Because we need to know because of the rains, you know. We need to know. We want it tested because they might say it was good. But we want, you know, your assurance from you, that they can test ours before they can do this cleanup and see if we need to do any more proposed cleanup. That's all I want to comment. Thank you very much.*

Municipal wells supplying drinking water to the City of Chino Hills are located in the Chino Groundwater Basin, which is north and up gradient of the facility. A gradient as applied to groundwater means that due to the forces of gravity and hydrostatic pressure, the water will flow from areas with higher elevations to lower elevations and from areas with higher hydrostatic pressure (due to weight of overlying water) to lower hydrostatic pressure. Upgradient, in this case, therefore means that groundwater at Aerojet is at lower elevation and/or lower hydrostatic pressure, and thus will not flow toward the City of Chino Hills municipal wells. Therefore, there is no need to test additional wells north of the site for contamination caused by Aerojet. Please see the response to General Comment 7 for a summary of surface and groundwater sampling at the facility, and for further information regarding the hydrogeology beneath the site.

MS. TAMOUSH: *Next speaker is Daryl Tamez.*

DARYL TAMEZ: *Would you mind just reiterating to me your involvement in this program?*

MR. SENGA: *Very easy. I work for the State of California. My responsibility is to make sure that the cleanup at this site is done in such a manner that the public health and the environment is protected. That's my job. My job is to protect you and everybody else in the State of California. That's my job.*

DARYL TAMEZ: *So in making sure that we are all safe in this cleanup, would you be aware of the surrounding areas and the places that are going to be affected by that, that proposed cleanup? And I ask this because it seems to me when we were asking questions about the maps and we were making comments about the surrounding areas that I didn't even know was here until about a week ago. You didn't seem to have clarification as to know where we are on this map. And that concerns me.*

Because I moved into this area a year and a half ago thinking I moved into a wonderful area. And now I am finding I am being contaminated. And my children, my future children are going to be contaminated by this. And it is a big concern to me. I want to make sure that, you know, where we are and what's been affected by this cleanup.

MR. SENGA: *That is correct. If it -- you know, I have been to the site. I can tell you that I know where the site is. I have been there. Maybe the map was confusing, but we will make sure that there are maps to make sure that that confusion does not exist. And we will do that.*

As mentioned earlier, the Corrective Measures Workplan contains provisions to prevent adverse impacts on human health during the implementation of the Corrective Measures. Please see the project description in Section II for further information on the provisions.

DARYL TAMEZ: *Okay. In the cleanup, the contaminants that you are going to be testing for that airborne and possibly what goes into our water supply, I would like to know what kind of contaminants are going into there, what type of breathing and ingesting, and how long would these contaminants be in the area or on the surface to be re-dredged and re-put into our air time and time again.*

The constituents of concern above cleanup levels are RDX, 1,3,5-trinitrobenzene, lead (at one location at the facility), and dioxin (at one location at the facility). These chemicals need to be cleaned up to prevent health risks to future residents at the site. In addition, CS-containing material has been found at two locations on the site. This material needs to be excavated and transported off site. However, as described in the response to comments made by Mr. Andre Hernandez on page 21 of this Response to Comments, present site conditions do not pose a risk to the off site community. Once the Corrective Measures have been implemented, confirmation samples will be collected to ensure that no residual contaminants remain at levels posing a risk to human health or the environment.

As described in Section II, and in the response to comments made by Ms. Judy Morton on page 138 of this Response to Comments, air monitoring will be required as part of the Corrective Measures. DTSC believes that these air monitoring provisions, along with the other engineering and administrative controls required, will prevent significant adverse impacts to the health of workers, the off site community, and wildlife.

Please see the response to comments made by Mr. Jose Palomo on page 142 of this Response to Comments and the response to General comment 7 for information on surface water and groundwater testing, and the potential for contaminants to reach municipal water supplies.

So when you find out, when you do have answers to our questions, I would like to know not only the responses to my questions, but I would like something delivered to me, via mail, of all the responses to their questions. Because if I'm not going to get that, if I am only going to get it if I ask it, I will re-ask the questions here. I want something I can hold in response to everything that is going on here.

MS. TAMOUSH: *Can I explain? If I can just tell you the response to comments has every question and every comment that was made tonight, and it is sent to every person who made a comment. That's*

why we ask for your address on these cards. And it is also available in the repository and then the file at our office too.

DARYL TAMEZ: *So the answer to that question?*

MS. TAMOUSH: *So yes you can surely --*

DARYL TAMEZ: *Everyone on the sign-up sheet?*

MR. SENGA: *Yes.*

MS. TAMOUSH: *If you want a copy and haven't made a comment, just fill out the card and write a little note on it, please. Do you -- anybody else?*

DAVID TENNIES: *I was unclear as to who -- I didn't know if I was just going to receive responses to what I asked.*

MS. TAMOUSH: *No, you will get every question and every response.*

DAVID TENNIES: *What is the time period for that turn around?*

MR. SENGA: *Can you please come -- what is the comment? Can you please come and --*

DAVID TENNIES: *David Tenniez. What is the turn around time for us to get that information back?*

MR. SENGA: *Okay. Okay. As you know and as the public notice says, the comment period will end on May 28th. After that point, that's when we are going to start looking at the comments. And depending on the, you know, size of the comments, the ones that we are receiving today and others that we may receive between now and then, it will depend on -- you know, there is no timeframe set. You know, we want to make sure that all the responses are, you know, are put together. And at that time maybe 30 days or more before we get any response.*

Due to the extended public comment period and receipt of numerous written comments, preparation of response to comments has taken longer than expected. However, the response to all comments are being sent to all those who provided comments either at this public hearing or in writing.

AN UNIDENTIFIED SPEAKER: *I would also like to know if there has ever been any testing, or will there be any studies that are comparing what contamination that have been coming to Aerojet related to, with regard to animals. And would there be to any? And just one last comment because other things have been brought out. While I respect this gentleman who is retired from Aerojet, I respect his comments that he made. I was hearing a lot of opinions coming from this gentleman. I would like non opinions. I would like statistics and answers from studies and realistic facts that are going to affect me. And I don't want opinions coming. I want data. I want to know how I am going to be affected in five years, ten years. And I want to know what my children are going to be affected by. Thank you.*

An ecological assessment was conducted to determine if levels of RDX or perchlorate in soil or surface water at the Facility posed a risk to animals that live around the Facility. This assessment, included as Appendix B of the RFI Addendum Report, determined that current conditions do not adversely affect animal health or populations.

MS. TAMOUSH: *Okay. The next speaker is Cynthia Sunagawa.*

CYNTHIA SUNAGAWA: *Hi. I, like our last speaker, I am a relatively new resident of I thought a beautiful and safe community. I would like to know what will this do to our property value? Not only to our property value, but if we discover the lake on Mayberry Drive are affected, what are we as homeowners supposed to do with our property? We obviously can't live here any longer. I mean, I have a small child. I am trying to get pregnant again. Do I dare? I don't know what is going to happen. Can you answer? I mean, what I am trying to ask, are you going to try and reimburse the people who you basically cheated into buying property in this area without letting us know the risks to it?*

MR. SENG: *Maybe -- let me say this. The responsibility of the Department as a regulatory, it is our responsibility to make sure that the contamination at the site is removed from the site. That's, you know, that's what we are here for. This is what we want to do, okay. Obviously in terms of properties and things like that, there is -- there is information on properties and things like that. And I can't go into that. But what I would like to be able to do is take that comment and obviously research it to make sure that your response is --*

CYNTHIA SUNAGAWA: *Yes. Because you guys were there long before this area was developed. So you knew that. They all knew what they were testing and what you guys were doing. And probably the developers knew what you were doing also. But they were looking for the almighty dollar, like always. But we, as the community here, looked at this beautiful area and safe area, thanks to our wonderful police department, as someplace wonderful to live. And now we find it is not so.*

As stated in the response to comments made by Mr. Andre Hernandez on page 21 of this Response to Comments, DTSC believes that present site conditions do not pose a health risk to the off site community. Evidence to this effect is presented in the RFI Report, the RFI Addendum Report and the Health Risk Assessment (Appendix G of the RFI Report and information in Sections 2, 3 and Appendix B of the RFI Addendum Report).

Provisions for protecting the community from impacts from the Corrective Measures are described in Section II of this Response to Comments, and in the Corrective Measures Workplan. Air monitoring will be conducted and excavation work stopped if dust levels exceed the allowable standard (10 mg/m^3) to protect the public from exposure to excess dusts generated by project activities. Excavation work will also cease if the wind speed exceeds 25 mph. The truck route has been chosen to go from Woodview Road to Pipeline, and south on Pipeline to Soquel Canyon Drive, thus avoiding schools. Further, the goal of the Corrective Measures is to clean up the contamination at the site and return the site to a condition that is protective of human health and the environment.

MR. SENG: *Let me clarify. I am not with Aerojet. My responsibility --*

CYNTHIA SUNAGAWA: *I understand. I would like -- I was, just like you said, this is going to go back to who knows, and we are going to get answers for all the questions. I just wanted to get that question out there.*

MR. SENG: *Okay.*

CYNTHIA SUNAGAWA: *And what I would also like to know is you guys are saying you are going to do a whole bunch of cleanup and testing of the water outside the boundaries. Well, I would like to*

know -- a gentleman earlier had said that they requested testing of the lake two years ago and they never received any documentation on that. I would like to know was that test ever done, and if it was not, how are we to know that you are actually going to carry through with the tests you are saying you are going to do now? That was it.

MR. SENGA: *Okay. Thank you.*

Off site testing of two drainages north of the facility and toward Woodview Road showed no detectable levels of chemical agents, explosive chemicals, perchlorate and semi-volatile organic compounds. Therefore, based on this testing, DISC have no scientific basis to test Lake Los Serranos. Please see the response to comments made by Ms. Marjorie Mikels on page 30 of this response to Comments for further explanation. The off site sampling results are included as Attachment G.

MS. TAMOUSH: *The next speaker is Pat P-i-o-n-k-e.*

PAT PIONKE: *One of the things I want to say, I want to kind of follow-up on what Judy said. I was in the military during World War -- Vietnam, okay. Say we have nerve gas and mustard gas that you know of, and then Judy had said we have things that are classified. Well, we have been there since World War II. Most of these classifications on military weapons are public information after 25 years. So that leaves everything basically they would have used should be classified. And you should know exactly what they used. This is the public, people who are living here. So we have the right, and you have the right to know what they had. Am I right or am I wrong on that?*

For information on the classified chemicals that were tested at the facility, please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments

Okay. And if you say, you know, we have the nerve gas and the mustard gas, well, what about napalm? What about Agent Orange? I mean, I know it exists. The military always said it would never exist. We all know it didn't exist, but it did exist. And how do we know that they didn't use it? But we should have the right after 25 years to be able to see all their records and everything they ever had up there.

There is no evidence that either napalm or Agent Orange were tested or present at the Facility.

Now, how do we know unless you do something about it? And you can do it after 25 years. We are talking about 30 years from Vietnam. And who knows what else they have now, the biological and so forth they have had up there that they have transferred to other places to dispose of. And the fires will kill some of it, but it doesn't always die. Napalm. Can you imagine a child opening up a weapon of napalm or something? We got to know that there wasn't any of these weapons. So what do you say to that?

MR. SENGA: *Again. What the information that we have provided in the report is what we have now. Based on the comment, again you have raised a comment for us to find out additional information, to find out what else was there and to find things what we have to do to find out what other information in terms if there is anything more. And that will be part of our response.*

The classified chemical agents tested at the facility were not loaded into weapons at the Chino Hills Facility. These chemicals were present only in laboratory quantities and tested inside the enclosed, airtight chamber. Again, Napalm was not present at the site.

PAT PIONKE: *Okay. You are saying all the information you have got is -- basically what you are saying is what you know?*

MR. SENGA: *Yes.*

PAT PIONKE: *So if we find weapons and chemicals eventually when they are bulldozing and so forth, who is responsible? So they are responsible totally, not you? They are buying you; right? I am just saying. Because, you know, like I said, I had dealings with the military and weaponry during Vietnam War. And trust me, there is things that you don't know about. But they have got to disclose everything to the public. If they don't, you are going to hurt a lot of our neighbors and everybody else's neighbors. I mean, I am not too concerned about the explosives and stuff, but the chemicals. I mean, chemicals are not good. And they can say -- one gentleman said, no, they never had chemicals. Well, come on. We don't know unless you are the ones that can find out. We can't walk up there. We can't even get past the gate. And if we did, we will be in big trouble. You guys have to do it for us. Thank you.*

MR. SENGA: *I represent the community and that is my responsibility to find that information. And we will provide the answer.*

DTSC understands and appreciates the concern regarding the presence of unknown chemicals at the Aerojet Chino Hills Facility. However, the general nature of the chemical agents used in the research activities at Aerojet is known. These agents are similar to "nerve gases", which are organophosphorous chemicals that disrupt nerve function, or mustard gas, which is an organic chemical containing chlorine that blisters the skin and inner linings of the mouth and throat if inhaled. Both families of chemicals are neutralized by the caustic solution that was used to clean the chamber that was used for the research. The caustic was dumped into the two caustic ponds mentioned in the RFI (SWMU #6A & 6B). Soil from these ponds was excavated and removed from the facility in 1980. During the site investigation, testing for chemical agents was performed and all sampling results indicate no detectable concentrations of any chemicals of concern. Based on this information, DTSC has concluded that there is no risk to human health due to chemical agents. Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments for further information on the chemical agents.

The Health Risk Assessment performed for the site concluded that there are no adverse impacts to the health of the off site community from present site conditions. Please see the response to comments by Mr. Andre Hernandez on page 21 and the response to General Comment 6 for more information regarding the health risk Assessment.

The chemicals that currently pose a health risk above safe levels for humans under a residential scenario at the site are the explosive chemicals RDX and 1,3,5-trinitrobenzene in soil, elemental lead in soil in one location (SWMU #2, Landfill) and dioxin in soil in one location (SWMU #1, Former Burn Area A). In addition, two locations contain CS (tear gas) containing material. Soil contaminated with these

chemicals above the established cleanup levels will be removed as part of the Corrective Measures. The CS-containing material will be excavated and transported off site. The removal of contaminated soil and CS-containing material will reduce the risk to human health and the environment to acceptable levels from these contaminants. Thus, there will be no adverse impacts to individuals present on the site once these contaminants have been cleaned up.

The item that poses the greatest risk to human health at the site is unexploded ordnance. At present, much of the site has been swept and cleared of the ordnance, and ordnance sweeps are continuing to ensure that the ordnance is removed from the site to the best extent possible. However, because present day ordnance detection methods cannot guarantee that all ordnance items have been removed from an area, DTSC is requiring Aerojet to submit a Long Term Operation and Maintenance Plan to ensure ongoing protection of human health and the environment with respect to ordnance. More information regarding this plan is available in the Conditions of Approval for Corrective Measures, which are included as Attachment B to this Response to Comments.

MS. TAMOUSH: *Next speaker, Diane Caliva.*

Diane Caliva's comments were presented by Ms. Darla Helms on pages 148-149.

AN UNIDENTIFIED SPEAKER: *We are both -- I just have one question. Those of us who live on the creek between Bayberry and Autumn, we see deformed frogs constantly in the water. We are inundated by little tree frogs that are this big (indicating) that have three legs, four legs, six legs, whatever. I insist that that stream, creek or whatever you call it is tested. There are children playing in that creek today. There are deformed frogs that the kids love to catch and bring home and they are deformed. Why? And I insist that we get an answer.*

Based on the evidence of known effects of RDX and perchlorate on wildlife, there is no evidence that either chemical causes deformities of frogs. Please see Appendix B of the RFI Addendum Report for further information on the ecological assessment performed at the site.

MS. TAMOUSH: *The next speaker is Rick Tanner.*

MR. SENGA: *Okay. If you have -- if you have your comments, we can -- we will check your comments and we will put them on the record that you have given us a copy of the comments.*

DARLA HELMS: *It is something that she wanted me to read, if that's okay. I think people want to hear about this. I'm Darla Helms. The speaker to be was Diane Caliva, and the paperwork is written by Nancy Wells, all of Chino Hills.*

(Reading:) "What is 'perchlorate' and what can be done about it? Perchlorate is a chemical used in the manufacture and testing of rocket propellants has been found in the soil and surface water in Chino Hills. Perchlorate is a health concern due to its interference with the iodine in the production of hormones in the thyroid. It is extremely soluble and stable when dissolved in water. However, when it dries, it leaves behind a perchlorate salt that can be flammable and highly explosive when subjected to heat or impact or reaction to other specific chemicals. A single gram of perchlorate salt has been linked to disastrous explosions in vent systems. In 1962 a blast involving perchlorate killed a

maintenance worker and injured two others. The blast was heard four miles away. In 1988 a plant in Henderson, Utah, had several blasts which killed two and injured over three hundred. The latest explosion killed one worker and critically injured another in July of 1997. The Occupational Safety and Health Administration is pushing to have perchlorate categorized by the federal government as a dangerous explosive. If, for example, a person walked through a rain puddle that had ammonium perchlorate in it, the mix of water and the compound on the person's clothes alone would not be dangerous. But when dried, a simple click of the shoe heel or the rubbing of one piece of clothing against another could set off a fiery flash, according to chemical engineer Michael Cypers of the Clark County Fire Department”.

“The method for removing perchlorate from test site areas in the past was to use water. Now they have discovered perchlorate in our water sources. Treatment methods effective for the removal of other pollutants are ineffective in the treatment and removal of perchlorate from the water supply. Currently there are no cost effective methods for removing perchlorate. U.S. Senator Barbara Boxer won approval for a study on the health effects of perchlorate. According to a spokesperson from Aerojet, the owners of the property in Chino Hills where perchlorate has been found, they plan to just take it away”.

Ammonium and potassium perchlorate are used as rocket motor fuel, in flares, fire works, and automobile air bags. In a pure crystalline form it does present an explosive hazard and must be handled under strict procedures and conditions to prevent accidental detonation. However, the perchlorate detected at the Aerojet Chino Hills Facility is in low concentrations mixed with soil. Perchlorate ion as found at the Facility is not reactive and does not present an explosive hazard. For more information on the human health effects of perchlorate, please see the response to General Comment 6. All soil contaminated with perchlorate above cleanup levels has been removed from the facility.

Low concentrations of perchlorate are present in surface water, but these levels pose no risk to wildlife or human health. See Section 3 and Appendix B of the RFI Addendum Report for surface water sampling results and the information on the effects of perchlorate on wildlife. A source of perchlorate in surface water is believed to be present in the landfill. The Landfill will be excavated as part of the Corrective Measures. The subsurface soil and localized groundwater (if present) below the landfill will be investigated to determine whether or not perchlorate is present. Perchlorate has been found in subsurface water at 40 feet below ground surface at the Upper A-12 test area at a level of 877 ug/L. Aerojet will be required to perform additional testing of groundwater at the Upper A-12 test area including the installation of additional borings and monitor wells. Please see Section II for further information.

Two offsite surface drainages north of the facility have been sampled for perchlorate and the results showed no detectable levels. These sampling results are included as Attachment G to this Response to Comments.

Please see the response to General Comment 7 for further information on the surface and groundwater sampling conducted at the Facility.

That was written and that was one of my concerns. And myself, as a citizen, when I heard about this chemical, the reason being that it links to the thyroid. And it is going to sound kind of funny, but I lost a cat last year to a thyroid problem. My neighbor lost a cat to a thyroid problem. A lady walking down the street had two humongous dogs, and I asked her "Why are your dogs so big?" Two different breeds. They both had thyroid problems. Judy Morton's dog had thyroid problems. You know, somehow we need to find out if these animals are outdoor animals going down to these streams and ingesting this water. Maybe there is possibly that chemical in there. And I believe it is. Thank you.

MR. SENGA: Thank you very much. Can you give us a copy of that, or you can mail it?

DARLA HELMS: *I will mail it because it is not mine.*

MR. SENGA: *Okay. I appreciate it.*

As noted above, the relatively low levels of perchlorate in surface water are not harmful to animals. Even if a dog or cat were to wander onto the facility and ingest soil or surface water, the levels of perchlorate in either soil or surface water would not be high enough to produce any adverse health effect.

MS. TAMOUSH: *I can give you my card. Rick Tanner is next. Karen Miller.*

KAREN MILLER: *Well, most of my questions have been asked, but I do want to back up. Judy and I live next to Woodview. We live on the little cul-de-sac of houses. I walk my dogs from 11:30 to quarter of one at night. And I know you can answer this if you are doing the report. I have witnessed so many trucks coming out of there at this time, covered double trucks with tarps. How many? I mean, you must know.*

MR. SENGA: *I cannot -- I don't know how many trucks, because --*

KAREN MILLER: *They have been doing it for months.*

MR. SENGA: *Let's see if Christine Brown can clarify that.*

MS. BROWN: *There were some trucks carrying soil from Aerojet --*

KAREN MILLER: *A lot of trucks.*

MS. BROWN: *-- in November '98. This involved removal of perchlorate contaminated soil. They removed the soil to prevent further leaching of perchlorate from soil into the water. And they got the soil out of the -- out of there before the rainy season. And there was also another remediation project back in '93, or -- '93 and '94 where they invest -- while they were performing the remediation for the OB/OD closure project, which was probably closed back in '92. Now if there are other dates that you have seen trucks, feel free to tell me.*

Prior to 1995 while the Facility was still operating, trucks loaded with munitions items would have been leaving the site at all hours of the day. Since the site closed down, there have been trucks carrying hay and other materials related to cattle, and oil products from the oil drilling operations not related to the operations of Aerojet. See Attachment H for copies of the information provided by Aerojet.

To DISC's knowledge, and based on discussions with Aerojet and McLaren Hart, there have been no trucks hauling contaminated soil leaving the facility at night. For further information, please see the response to Question No. 8 from the Judy Morton letter dated May 28, 1999, included in Section V of this Response to Comments.

KAREN MILLER: *I don't know the dates, but I just witnessed, I mean, lots and lots of trucks just tarped. If it was contaminated material, and I was told later on it was, they were not really, you know, well secured. And they went down Peyton at times and they went down Woodview at times. And I would like to also say that since I have lived there, we built a house there, we have had an explosion last year. And when we called, they told us it was classified information. And then we kind of persistent, my neighbor Barbara, and they told us it was chemicals that blew up as they were removing toxic chemicals and they had the bomb squad go out there. We had all kinds of little things. We had our walls move in an explosion and we tried to get information. They are very secretive, you know. I mean, nobody is up front.*

DTSC acknowledges that the community has concerns and questions regarding the past operations of Aerojet, and some of the emergencies and incidents that have taken place at the facility involving streets being blocked off, sirens or other incidences. However, the site is now closed, and the focus of the present project is on the site cleanup and the Corrective Measures. DTSC has done several community outreach activities in the past, including a community survey in Fall 1996 in which questionnaires were mailed to a number of residents, and a fact sheet in Summer 1998 which was also mailed to a number of residents. We regret that we may not have reached all those who have concerns regarding the site. Now, after the public hearing, the two additional public meetings, the placement of documents relating to the cleanup efforts in the Chino Hills Library, the letters sent to the community in October 1999 and August 2000, and this Response to Comments, DTSC has made a great deal of effort to provide the community with adequate information regarding the cleanup activities taking place on the site. While the Corrective Measures are taking place, the community will be informed in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) regarding the time frame for truck traffic carrying contaminated soil and regarding detonations occurring at the Facility. Please feel free to call any of the DTSC project personnel listed in Section II of this Response to Comments with any additional questions or comments you may have.

And I want to tell you all the beef up there. Bud is a rancher up there. He's been ranching for about 25 years. And after I found out about some of this toxic material, I asked him about it. He has never really been informed of a lot of information other than everything is safe. So he has beef coming out of there. For 25 years they drank the water up there and they are spread over a large area. And it is another concern that we should look into. Not that we basically can do anything right now, because, you know, but if it has been contaminated, you know, we are sending beef out into more than just our community. And he is being told the water is safe, everything is safe. And he accepted it at face value.

Bud the rancher was informally interviewed by Joe Bahde of McLaren/Hart and said that he had no concerns about Aerojet operations affecting his cattle. Based on information gathered at the facility and the ecological risk assessment conducted to evaluate the effects of explosive chemicals and perchlorate, DTSC believes there are no harmful effects to cattle from present conditions at the facility. The ecological risk information is included as Appendix B of the RFI Report.

MS. TAMOUSH: *The next speaker is Kyle Crampton.*

KAREN MILLER: *You can check with Ontario Bomb squad. We called and verified.*

Please see the response to comments made by Mr. Ken Baxter on page 105 for information concerning Aerojet's past operations and the detonations that have been occurring at the facility since the facility ceased operation in 1995, and the response to your previous comment on this page.

BARBARA WHALEY: *My name is Barbara Whaley. I live on Midler Lane. I called because we know the bomb squad and they blocked off our street. You can call. I call the police department when something happens, and they put me through and they have to call me. It was Ontario Bomb Squad. And that was really scary. But it is on record there.*

MR. SENGA: *Thank you.*

Please see response to Karen Miller above.

KYLE CRAMPTON: *Hi, Kyle Crampton. First I would like to display my utter disgust in the City of Chino Hills officials that not the mayor and not any other City Council members can't show up for this meeting. I am kind of curious. What is more important? To have them, the city that pays their bills and feeds their children, that they must be home taking such good care of. And also why the CHP was here and left, not Chino Hills Police. I guess to be security. I am kind of glad it was CHP and not Chino Hills Police, but that's a different subject.*

As reported earlier, the City Council requested a separate meeting that was held on June 7, 1999.

And also, with the removal of the soil, are you going to remove all the contaminated soil from the site, or is this just going to be like stuff that is really bad?

MR. SENGA: *The proposal is to remove all the soil that does not meet the cleanup goals set up by the Department.*

KYLE CRAMPTON: *The cleanup costs?*

MR. SENGA: *The cleanup goals. The standards, the levels that are unsatisfactory to human health and the environment.*

Soil that exceeds the health based cleanup levels (HBCLs) will be removed from the Facility as part of the Corrective Measures. The cleanup levels were established under a Health Risk Assessment that evaluated the probability of a population contracting cancer or other health effects from the chemicals of concern while living on the site for seventy years. The standards used is to calculate the probability of a population contracting cancer while living directly on the site (once it has been cleaned up) such that the occurrence is no greater than one in one million with a minimal chance of a person experiencing non-cancer health effects (hazard index of less than 1). Therefore, the resulting cleanup levels reflect a very low probability of such occurrence.

KYLE CRAMPTON: *So if there is a real wide spread of contamination up there and Aerojet is on a huge hill and you don't know how far down any contamination goes or how widespread, is all the dirt all around there going to be torn out and there is going to be a huge crater? What if that spreads, that contamination spreads all the way into our home? Are we going to be kicked out of our homes*

because they need to clean it up? Is the Government going to come in and tell us that it is no longer safe to live here and to pick up and move on?

MR. SENGA: *Let me clarify this. As the report says, we identified areas of Aerojet that require cleanup. And those are the areas for which a cleanup proposal has been put forth.*

The extent of the contamination on the site is known and is not widespread. The extent of chemical contamination other than uranium is documented in the RFI Report and the RFI Addendum Report. There is no evidence that the contamination is widespread, or has migrated off the site. The Health Risk Assessment demonstrated that present site conditions do not pose a health risk to the off site community. Please see the response to Mr. Andre Hernandez on page 21 of this Response to Comments for further information.

The cleanup measures for soil are limited to the 10 areas designated in the Corrective Measures Workplan, and the excavations will take place in localized areas. Therefore, there will not be a crater or any other major disruption of the land surface. Groundwater contamination has been found at two localized areas at the site, and, due to the hydrogeology beneath the site, the contamination is extremely unlikely to migrate. Please see the response to General Comment 7 for further information on groundwater and the hydrogeology beneath the site.

The extent of depleted uranium contamination is known and is documented in two reports, "Aerojet Ordnance Chino Decontamination Activities", dated April 1993, and "D&D of Aerojet Chino Hills Facility, License No. 1450-36", dated February 1996. Much of this cleanup has been completed under the regulatory oversight of the Department of Health Services, Radiologic Health Branch. As mentioned in the Response to General Comment 4, DTSC will be reviewing the existing sampling data. If additional cleanup is necessary, it will be limited to the removal of soil in distinct areas.

Much of the site has been swept and cleared of ordnance. A few distinct areas remain to be excavated, and these will be excavated as part of the Corrective Measures. Ordnance sweeps are continuing in a few areas of the facility to ensure that the ordnance is removed to the best extent possible. Please see Section II for further information regarding DTSC's oversight of the ordnance clearance process

The Corrective Measures Workplan contains provisions for protecting the community from dust emissions as well. DTSC has added additional requirements to the Corrective Measures for protecting the community, and these are described in Section II. Please see the project description in Section II of this Response to Comments for additional information.

KYLE CRAMPTON: *Okay. Well, I would just like it to be stated that there should be a lot more testing, because I know -- I know it is on the outside of their gates. Thank you.*

MR. SENGA: *Thank you.*

Testing has revealed no detectable contamination migrating off site, with the possible exception of the southwest corner of the facility, where sampling performed in the Landfill Creek revealed perchlorate levels of 83.2 ug/L at the edge of the facility. For further information on the surface water sampling

performed at the facility, please see the response to General Comment 7 and Section 3 of the RFI Addendum Report. Sediment sampling has also been performed at two off site locations north of the facility. These sampling results did not detect any chemicals of concern. This indicates that no contamination was present. For further information on this sampling, please see Section 6 of the RFI Addendum Report and Attachment G of this Response to Comments.

MS. TAMOUSH: *The next speaker is Leticia Ortiz. No? Carol Dobrikin.*

MR. SENG: *Now, if anyone -- obviously I do realize that this has been a long night for all of us. And for some of you, you know, maybe some of the members of the community have already left. If you know anybody who intended to make a comment tonight and did not get a chance to do that, please make sure that they do that.*

AN UNIDENTIFIED SPEAKER: *Can you do another one of these meetings soon?*

AN UNIDENTIFIED SPEAKER: *I know it's been noticed, but can you do another one soon for the people that haven't been --*

AN UNIDENTIFIED SPEAKER: *Can you invite the city officials?*

AN UNIDENTIFIED SPEAKER: *I think the City is represented by Jeff. He has been sitting here taking notes all night long; is that correct?*

AN UNIDENTIFIED SPEAKER: *Why didn't you speak up? In our letter it says Aerojet representatives were here. I'm sure they are not going to let us know where they are.*

DON VANDERKAR: *Yes, we are. Yes. We are here, here, and there.*

AN UNIDENTIFIED SPEAKER: *You are an Aerojet representative?*

DON VANDERKAR: *Don Vanderkar.*

EDIE CARTWRIGHT: *My name is Edie Cartwright.*

HASSAN AMINI: *And my name is Hassan Amini of McLaren Hart. By the way, I am very happy to be here. This is very informative. Thank you.*

EDIE CARTWRIGHT: *Hi, Judy. I sat in your garage two years ago.*

JUDY MORTON: *I just got it a couple of weeks ago.*

CAROL DOBRIKIN: *I am delighted to hear that Jeff is here. I have a question for him. Okay. Now, I want to thank you for letting me look at these two volumes. However, I have a comment. These two are different than the seven volumes, about the same thickness maybe, they just got more volumes and they are skinnier. This is an awful lot to look at that is there for such a short time for this many people that have interest. Again, I repeat, is it possible to have more than one copy so that the library can keep one reference copy there at all times and circulate in their vertical file something so that we can take them home and look at them for overnight or a few days?*

MS. TAMOUSH: *I will talk to the librarian about that.*

MR. SENG: *Yes. We will try to get an additional copy to the repository so that the community can have additional copies to look at.*

A second set of RFI documents was prepared for and submitted to the Chino Hills Library.

CAROL DOBRIKIN: *I would suggest one to stay in the permanent reference, and at least two or three circulating.*

MS. TAMOUSH: *I will talk to the librarian about it.*

CAROL DOBRIKIN: *Yeah. Now in the one that I saw in the library, in the back end there was an appendix that said that it was realized that you could never find everything that was there. But you were going to make an attempt to supervise the, or whatever it is, the engineering company that was hired, to pick up as much as was reasonably possible. However, my question is -- first, we know we need to get it cleaned up. But my question is to what levels does it get cleaned up?*

The cleanup levels for the chemicals of concern at the facility (in this case RDX, 1,3,5-trinitrobenzene lead and dioxin in one location) in soil are set at such a low concentration that the chances of a resident living on the site (a residential scenario) would contract cancer is less than one in one million and the chances that a resident would experience health effects other than cancer are also very low (hazard index of less than one). For further information on the health risk assessment for soil, please see Appendix G of the RFI Report and Section 2 of the RFI Addendum Report. Similar health based levels have been established for surface water and will be established for the two locations where groundwater is contaminated.

Clearing the site of ordnance is being performed using the best available technology. This consists of using metal detection equipment to locate ordnance items and using a systematic technique of “walking” the suspected areas to be cleared of ordnance in a systematic manner (Specifically, 100’ x 100’ grids are established with 10’ wide lanes. The grid is then walked using a hand held metal detector or geophysical instrument) This approach was designed to locate as many of the ordnance items as possible. No ordnance sweeping technology currently exist that can guarantee a complete removal of ordnance items. Therefore, DTSC is requiring Aerojet to submit a long term Operation and Maintenance Plan that includes provisions for ordnance. Please see section II for further information on this plan.

As mentioned in the response to General Comment 4, uranium levels currently existing at the site will be evaluated by DTSC. If the levels are not adequately protective of human health, Aerojet will be required to either perform additional cleanup measures and/or a deed restriction will be placed on the property

If it is just going to stay there and lay fallow for as long as they have been contaminating, maybe the next 20 years it stays as rural agricultural and mother nature cleans it up? Or do you have to clean it up to a different level if you are going to dig it up, dig up roads, put down slabs, put in water systems and sewer systems?

Natural processes will not reduce the levels of explosive chemicals in the soil to acceptable human health based levels, nor will natural processes render ordnance items safe. Therefore, the Corrective Measures need to be implemented in order to make the site suitable for future land use.

Now, if there is contamination in the water that doesn't get out of the subterranean level for another 30 years and it takes a couple of fires and earthquakes to bring it up to the surface, then it gets into the sewage system and the drinking water system right now as we speak. In Loma Linda where the geology is very similar, it is earthquake prone country to what we have here. The City of Loma Linda's water is now being threatened by a toxic plume from the Kaiser Permanente plant and Lockheed that was there that was abandoned 30 years ago. Now, would your recommendations as to the level of cleanup, the type of cleanup, and how long it has to remain available for testing be different if it were for homes, or to go back to the way it was when Aerojet went there, rural

agricultural? These are things I think that really need to be discussed and we need better communication on.

As mentioned in the response to comment made by Marjorie Mikels on pages 101-102 of this Response to Comments, the Chino Basin, where area drinking water supplies are located, is up gradient of Aerojet and therefore does not have the potential to be affected by contaminated groundwater at Aerojet. The contaminated groundwater at the facility is localized and extremely unlikely to migrate to deeper groundwater or off the site. Please see the response to General Comment 7 for further information.

As mentioned above, the site cannot be left in its current condition and be used for any purpose, either residential or commercial. Therefore, the site must be cleaned up. The residential scenario is most protective of human health and the environment, and has therefore been selected by DTSC as the cleanup objective for the Aerojet site.

Now, my question to Jeff, the City Planner, which I think is very important, is the maps on which they are basing some of their information where the Soquel Canyon, where the Soquel anticline is, that is mentioned on page E-4 of this book over here. Okay. Are those maps that were presented by the County before we incorporated? Or are those maps presented by the City's current City Planning Department which has removed Soquel Canyon Road from the general plan?

The maps in the RFI Report identify the current location of Soquel Canyon Road (former Woodview). No other City proposed routes or plans are shown on these maps.

The funny part of this was two Soquel Canyon Roads, one of them in Orange County that services the back end of Aerojet, that has nothing to do with the current City Council, and yet that is their major artery for circulation through the area. There is another Soquel Canyon Road that was recently built that goes from the 71 to the bottom of Aerojet. Then there is a horse trail that they used to use -- they have this horseback ride. The road was so steep that it was only traversal by horseback. They used to have the rodeos in the back end where that anticline is. That's why I say there's a lot of really twisted geology.

DTSC is aware of the dirt road leading from Carbon Canyon Road through Soquel Canyon to the southwest corner of the Aerojet facility. This road is not accessible to the public. It has two gates, one at the end of the road leading to Carbon Canyon Road, and the other gate at the entrance to Aerojet. Aerojet locks this second gate. The other road, Soquel Canyon Drive, is paved and leads from Pipeline to the 71 freeway, and is not connected to Aerojet. Please see the response to your earlier comment on page 19 of this Response to Comments. For more information on anticlines in the Chino Hills area, please see the memo prepared by Mr. Paul Carpenter, DTSC geologist. This memo is included as Attachment D.

Now, what is happening with the city is they are saying, "Oh, all of this was done by the County. It is not our fault." But, they are not correcting the map to show that Soquel Canyon Road was removed from the general plan. So there is a whole bunch of stuff that really needs to be clarified before you make the decision as to whether you are going to clear this for industrial, residential or saying that in

view of the fact that it is such a mess, that it is better to be lying fallow for the next 20, 30, 40 or 50 years.

The City's plan for extending or rebuilding Soquel Canyon Road is not part of the Corrective Action project. As mentioned above, leaving the contamination at the site is not protective of human health and the environment.

MS. TAMOUSH: *The next speaker is Deborah Ann Peterson.*

MR. SENG: *Is that the end of your comment?*

CAROL DOBRIKIN: *Well, she told me I was out of time.*

MR. SENG: *Okay.*

MS. TAMOUSH: *Ma'am, if you want to do another one, you want me to give --*

CAROL DOBRIKIN: *I will just be very brief. How can we communicate on what information you need from us, and how will that affect your decision as to what level of cleanup you recommend or what level of non-disturbance you recommend? Because what we are seeing might just be the tip of the iceberg. You clear the surface, then they dig down really deep for a sewer. Lord knows what is going to come up.*

Please see the response to comments made by Mr. Kyle Crampton on page 153 of this Response to Comments.

DISC encourages members of the community to speak with the project staff individually and to discuss any specific concerns you may have.

And also the weather here is very cyclic. We will have drought for five years, and nothing will show. You can test now until the cows come home. But after the next fire and then we have a major flood, Lord knows what will come up. In the meantime, you have already written this off and they have already started with their sewage and their water systems and their slabs for roof tops and the whole nine yards. So my question is the timing. Why the rush to roof tops without adequate precautions being taken and an adequate time lapse before you say it is okay to put more homes here? So the zoning is critical to what decisions you make.

MR. SENG: *Okay. Let me make sure that I clarify. I said this earlier, that as far as the development of this property, that decision lies on the City of Chino. That is a local government decision. And I would expect that the City of Chino, when they make the decision about the development and come to the community for their --*

The Corrective Measures at the facility are not tied to any redevelopment project proposed by the City of Chino Hills. The need to clean up the site is based on the need to remediate contamination left at the site, which would impact human health or the environment.

AN UNIDENTIFIED SPEAKER: *I'm sorry. Loop one, if it gets approved with the Catellus project, which has just been approved by the planning commission, has provisions in it that says you are automatically approved in Group Two. And I think Group Two goes up through Aerojet. Jeff, am I right on that?*

JEFF ADAMS: *No, I wasn't aware of the planning commission approved Catellus project yet.*

CAROL DOBRIKIN: *Don't you read the Champion?*

MR. SENG: *Okay. Let's --*

CAROL DOBRIKIN: *Subscribe to the Champion instead of the Bulletin.*

AN UNIDENTIFIED SPEAKER: *Could you say if that's true? If that loop goes there.*

JEFF ADAMS: *The loop goes --*

MR. SENG: *Can you please state your name so that you want to make a comment. Because this is -- I want to make sure that everything that is said during this meeting, this hearing, it is recorded. So, please.*

JEFF ADAMS: *Would you like me to respond to him or wait? My name is Jeff Adams.*

CAROL DOBRIKIN: *Jeff, you can have the rest of my time at the microphone.*

MR. SENG: *If you want to make a comment, go to the microphone and make a comment so we can make sure that your comment is recorded and we can respond to it.*

JEFF ADAMS: *Just to clarify the statement earlier, it mentioned that the Catellus project had been approved by the planning commission. It's going to the planning commission meeting on the 18th, next Tuesday night, for review. The staff recommendation was approval. So I think that's where the misunderstanding was. The other question was if Loop Two goes through the Aerojet property, and it is sequentially aligned right now, that would be the case right now. Loop one has been pretty well engineered so that it addresses the Katella's project. And it connects to the southern perimeter of Peyton Drive. So I don't know if the final -- where exactly the final line will go. It is basically through that area to serve that property as well as other surrounding property. So that's basically it.*

MR. SENG: *Thank you very much. Thank you for that clarification.*

DEBORAH PETERSON: *I am Deborah Peterson and currently reside on Rainbow Ridge Drive. And I think that my house is closer to all the buildings than just about anybody else's houses here. And I am hoping, as the one gentleman who had sat in this area stated, that it is hysteria based on non-information. I am hoping and I am praying that that is the truth. And I am just praying now.*

But I would like to go on record that the reason why I am here right now is the incidents of cancer in my neighborhood. My next door neighbor died of cancer. The woman across the street died of cancer, and the neighbor to her left died of cancer. And that concerns me. I had a miscarriage with no reason as to why I should have miscarried. So there are health concerns. However, I do pray that it is hysteria. But I do want to be on record should an attorney ever look at this later on, that those incidents have happened on Rainbow Ridge Drive.

MR. SENG: *Thank you.*

DTSC representatives empathize with the loss of loved ones and friends. It is our mission to protect human health and the environment, and we have required Aerojet to adhere to stringent standards regarding the site investigation and cleanup goals. Over 500 samples were collected and analyzed for a number of contaminants, predominantly explosive chemicals, perchlorate and metals. The Health Risk Assessment (See Appendix G of the RFI Report and Sections 2 and 3 of the RFI Addendum Report) has demonstrated that there are no health risks posed by the site in its present condition to the off site community. In addition, provisions are provided in the Corrective Measures Workplan to protect the community from any adverse health effects from the implementation of the Corrective Measures, the primary provision being to control dust generation. Please see Section II of this Response to Comments

for a description of the Corrective Measures and the provisions provided to prevent adverse impacts to the community and the environment.

The Desert Sierra Cancer Surveillance Program has performed a study of childhood and adult cancer rates in the Chino Hills area at Loma Linda Medical Center, and the results demonstrated that rates of cancer were not increased. Please see the response to General Comment 2 for further information.

MS. TAMOUSH: *I can't read this one too well. Jacki Mastro, M-a-b or M-a-r. Anybody named Jacki still here?*

Dick Ridinger, it is your turn.

DICK RIDINGER: *Thank you. Yes, I would like to ask you what your budget is for this project and how long is this project supposed to last?*

MR. SENG: *Okay. The project, as far as the project is concerned, there is no specific dollar budget from the Department for the project because the cost of the project, basically we are on a reimbursement basis with Aerojet. If Aerojet -- Aerojet in this particular case is paying the cost of the Department, what the cost that we incur during all the activities that are related to the cleanup of the site. So there is no department budget that we have been approved of.*

DICK RIDINGER: *I couldn't hear you. Did you just say Aerojet was paying for the investigation? Is that what you said.*

MR. SENG: *A law was passed which requires that the Department get reimbursement for activities that are relating to the cleanup of sites. And, in this case, Aerojet obviously is reimbursing the Department for its costs.*

DICK RIDINGER: *And maybe someplace along the line, say we are a corporation, we want to look at our bottom line and make more money and they don't want to pay you anymore. Do you have additional funds to continue? Good question, huh? Has it already been decided to clean up the property, or is it possibly to just lay there?*

MR. SENG: *There is a proposal, which is what we are talking about tonight, which is the proposal to clean up the site. That is what we are accepting the comments for. It is a proposal to clean up the site.*

MR. RIDINGER: *So it has not been decided to clean the property up?*

MR. SENG: *There is a proposal on how to clean up the site, which is what we are putting forth for comments and input before a decision is made on how to do it. But a decision has been -- a decision to clean up is obviously made. That's why we have a proposal on how to clean up.*

CAROL DOBRIKIN: *Are you saying there will be a cleanup?*

MR. SENG: *Yes.*

DICK RIDINGER: *You have already answered my question. They already decided to clean it up and you can't decide to stop it.*

MR. SENG: *We have to clean it up. That is our responsibility.*

The site cannot be left in its current condition and be safely used for any purpose, neither residential nor commercial. Therefore, the site must be cleaned up. The residential scenario is the most protective of human health and the environment, and has therefore been selected by DISC as the cleanup objective for the Aerojet site.

CAROL DOBRIKIN: *Yeah. But to what level and to what purpose makes a big difference. You have to dig up the shrapnel. You don't want kids going out and getting shot. But you can't clean the underground water. And if there is stuff that has been buried for years, maybe it is best to leave the top surface there and not dig up for sewers. Because Lord knows what you find when you really get down, when you start digging.*

Please see the response to comments made by Mr. Kyle Crampton on page 153 of this Response to Comments.

MARJORIE MIKELS: *And the use you make of it is going to determine the level of the cleanup. How can you separate those?*

No. In fact, the reverse is true. The level of cleanup determines the use. DTSC determines the level of cleanup independently of any future development. Development of the site takes place only when the cleanup is complete and the site can safely be used for the proposed purpose.

MR. SENGA: *Can you please -- is that a comment? I want to make sure -- again, as I said, I want to make sure that comments are being made relating to the project are captured. And this way the Department can be able to respond to that. So can you please come forward and give us -- if that is a comment, I want to make sure your comment is recorded.*

MARJORIE MIKELS: *I think she can hear me okay.*

MR. SENGA: *Can you please state your name?*

MARJORIE MIKELS: *Marjorie Mikels.*

CAROL DOBRIKIN: *Carol Dobrikin.*

MR. SENGA: *Thank you.*

RON PESANTE: *May I continue?*

MR. SENGA: *Yes, please.*

MS. TAMOUSH: *Please.*

RON PESANTE: *Will you or do you have personnel at the site at all times during the cleanup?*

MR. SENGA: *Okay. One of our responsibilities of the Department is obviously to oversee the work and, you know, during the times that the work is going on. That's what -- that is how we do the work. We have -- there are times that we may have someone there, but at this stage I am not aware there is a plan to have somebody there all the time. But that is a good comment and we can look into that.*

DTSC staff will be onsite periodically to "spot check" and oversee the work and to take split samples

RON PESANTE: *Okay. Now we talked about trucks being covered and all of that. But we know how trucks work. They are not going to stand there with a teaspoon to put the soil into the truck. They are going to use the largest piece of equipment they have to dump it in there, which means there is going to be overflowing of dirt on running boards and tires and everything else. Are they going to be*

required to build a clean room where trucks go and drive in and are totally hosed down before they come down the hill behind our houses distributing dirt and whatever?

MR. SENG: *May the record reflect, Christine Brown can comment.*

MS. BROWN: *Yeah. The trucks will be decontaminated before leaving the facilities. That is part of the procedure. When you excavate the soil and load the trucks, then you decontaminate the trucks with water, then you drive the trucks off site so they don't have contamination of unhealthful levels before they leave. There is a process.*

The trucks will be decontaminated by dry brushing before leaving the site. Please see Section II and the Conditions of Approval (included as Attachment B to this Response to Comments) for further information regarding transport of soil in trucks.

RON PESANTE: *I see. Because pretty soon you got the contamination where all the trucks are setting, it is on the tires, and then as it drives down the road, it throws and sprays this into the air, okay. My point is well made. And the map. We are talking about you bringing a better map. And there is air circle [s.l.c.] map. The City has them on the wall down there. It shows the area very well. But also we need to see an underground map, the curvature of how the rocks are formed and whatever, so we can see wherever the streams are, if we might have an earthquake, where the water might pull. I thank you very much.*

Topographic maps showing the geologic cross section of the site are included as Figures 3-1 through 3-5 of the RFI Report

DEBORAH ANN PETERSON: *And all the underground fires that for years and years there has been the rumors that it is classified information, all the underground tunnels that connect other facilities.*

MR. SENG: *Excuse me. State your name again.*

DEBORAH ANN PETERSON: *Yes. Deborah Peterson. And my concern is the years and years of rumors of the tunnels and what is still in those tunnels. Is there any contamination in there? And my concern is also, as these ladies in the back said, Marjorie and Carol, that perhaps it is better to just let it lie underneath there without taking up dirt and exposing whatever has been down there for so many years. Thank you.*

MR. SENG: *Thank you.*

As mentioned in the response to comments made by Mr. Ken Baxter on page 105 of this Response to Comments, there are no underground tunnels at the Aerojet site. The site cannot be left in its current condition and be safely used for any purpose, neither residential nor commercial. Therefore, the site needs to be cleaned up. The residential scenario is the most protective of human health and the environment, and has therefore been selected by DISC as the cleanup objective for the Aerojet site.

DICK RIDINGER: *Dick Ridinger. It was asked earlier, and I forgot to re-ask. Why are we held to this May 30th deadline? Can it be moved?*

MR. SENG: *The law requires that we provide to the community a timeframe for them to make a comment. The law requires a 45-day comment period for the -- for the Department to provide to the community for them to give us input. That is where that timeframe comes from.*

DICK RIDINGER: *Okay. So that's the timeframe. But can't that be extended also?*

MR. SENG: *Sure, if there is a reason to extend. Obviously those are things that the Department obviously will look into.*

DICK RIDINGER: *Okay. Well, I gather from this audience, which is the public, that they would like it extended. I think maybe another 30 days would be ideal. And can we decide that tonight?*

MR. SENG: *No, I cannot make that decision because I, myself -- I, myself also have to go -- that's kind of a decision I also have to go to my management. Because that decision -- obviously I can't do that. Obviously that's what the community says. I will share that with my management and if that's what it takes, then --*

DICK RIDINGER: *I would think that you would already have the authority for this project to extend, if necessary. I will sit down. Thank you.*

MR. SENG: *Thank you.*

The public comment period was extended as requested.

MS. TAMOUSH: *Leslie wrote a note that you would like a copy of -- the copy of the questions.*

LESLIE BYRNE: *I also have a comment. Actually, I end up having a few comments. First of all, I was wondering about the underground tunnels, how they are going to be dealt with. I didn't realize until I heard this that there were underground tunnels. So that was a real concern. Are they going to have people go down there and do samples?*

As mentioned in the response to comments made by Mr. Ken Baxter on page 105 of this Response to Comments, there are no underground tunnels.

Another question is it sounds like cleanup has been done already, especially with all the trucks that we're hearing going back and forth at night. And why is it at night? That is very interesting and almost suspicious. So maybe that question can be answered.

According to Aerojet and McLaren/Hart representatives, toxic materials were not transported from the site at night. All soil transportation activities occurred during the daylight hours in accordance with Department of Transportation regulations. As documented by information provided by Aerojet to DTSC in August and September 1999, much of the truck traffic at night since the facility closed in 1995 consists of trucks hauling hay and other materials relating to cattle, as well as oil products from the oil drilling operations on the site not related to Aerojet operations. Please see Attachment H of this Response to Comments for copies of the information provided by Aerojet.

And then the toxic ponds. If cleanup hasn't begun and the water is gone already, does that mean all this water, because they were unlined, the 270,000 tons of toxic waste in the ponds, where did that waste go? So those are my questions. Thank you.

MR. SENG: *Thank you.*

The holding capacity of the unlined caustic pond was 270,000-gallon, not 270,000 tons of toxic waste. The wastes that the ponds held were caustic (alkaline) solutions. These ponds were remediated under the

oversight of the RWQCB in 1980. Soils with high pH (alkaline) were excavated and transported to an offsite landfill. During the RFI, these ponds were re-sampled. No chemical of concern was detected in the pond excavation areas.

MS. TAMOUSH: *The next person is Darla Helms.*

DARLA HELMS: *No. I just read for someone.*

MS. TAMOUSH: *Marianne Napoles. Can you state your name?*

MARIANNE NAPOLES: *Hi. My name is Marianne Napoles and I am a reporter with the Chino Hills Champion Newspaper. And I would just like to be able to report on the gentleman's concerns about the chemicals that were classified. He was mentioning that 25 years have passed and now that they should be able to be opened. And I was wondering if you could look into that. Because I know the Aerojet officials had mentioned that for those chemicals that were classified, they can only look at families of chemicals. They did acknowledge that there were chemicals that were classified and that they can look then at families of chemicals. So I was wondering if you could look into if those classified chemicals are open now so that maybe we can report on now if maybe napalm or Agent Orange is even mentioned.*

For information on the classified chemicals that were tested at the site, please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments. There is no evidence that either napalm or Agent Orange were tested at the site.

Also, one -- I would like if you can check into on page five of the Wyle Laboratory Report that came out of McLaren Hart documents. It mentioned the southeast target area. And it mentions many sections in this area have undergone a landslide, and if any ordnance contamination is present, it would be located very deep within the hillside. And that 1.3 acres were swept of this unit, and that one of the sweeps was conducted using the flex gate magnetometer. And because of the topography and the dense brush, a Hunt and Peck sweep process was employed. I was wondering if we can get a little more information regarding the landslides, if there could be information given on that. And if how deep could these ordnance's be, because it is kind of vague. It just says they would be located very deep within the hillside.

Earlier reports and information had suggested that a landslide located in the southwestern portion of the Facility was caused by ordnance testing operations. Others reported that the landslide occurred naturally and that the impact area was located east of the landslide. McLaren/Hart had their UXO subcontractor, Wyle Laboratories, conduct ordnance sweeps in and around the landslide using a "hunt and peck" method to explore the potential presence of UXO. The "hunt and peck" method is used as a screening tool only. The "hunt and peck" sweeps are conducted randomly and without systematic gridding and sampling of the sweep area. The "hunt and peck" method determines if UXO is present but does not clear the area of ordnance. These preliminary sweeps did not detect any UXO or UXO-related fragments, suggesting that the landslide occurred naturally. Later, former Aerojet employees were brought to the area and confirmed that the landslide was natural and identified the location of the former target area to be outside the natural landslide area. Ordnance sweeps of that area were completed in which the area was brush abated, divided into 100' by 100' grids, and systematically searched and cleared in and around the impact area.

And the other question I had is on the Dragon Tooth Mine. The Champion, as Aerojet remembers, was informed by a former employee who lives back east. He informed us of the Dragon Tooth Mine. And he described those as anti-personnel mines used during the Vietnam era that were intended to maim, not kill, so that the Vietcong would have to come out with a stretcher and bring the person back so that two would be out instead of one. And I guess that's war. But he was explaining that to us. And Aerojet, you know, very graciously flew him over and, you know, made sure that he pointed out those areas of concern and worked with him very well. So Aerojet was to be commended for that.

But I would like to know more about the Dragon Tooth Mine test areas. And I know they did some sweeps there. They found four Dragon Tooth Mines with live fuses. However, none of these items contained a live filler. And this employee was very concerned that they were encased in plastics, and that he was concerned that metal detectors might not be able to find some of that. But a gentleman here tells me that there is shrapnel involved with that. And here again it does say that a Spector [s.i.c.] metal detector was used because of its ability to detect nonferrous metal. But, anyway, I just would like to know a little bit more about the Dragon Tooth Mine areas.

The Dragon Tooth Mine test area was identified as SWMU No. 10A in the RFI Report. The body of the mine is approximately 3 inches long and made of plastic that typically cannot be found by metal detectors. However, the fuse is made of metal components and can be detected. In fact, one of the four mines found in SWMU No. 10 was by metal detector.

The Dragon Tooth Mine contained a self-destruct mechanism that renders the explosives harmless in 30 to 90 days. Further, the plastic bodies have begun to decompose after so many years in the environment. None of the four mines found contained explosives. The concern of these mines at this time is the fuses. The fuses contain the approximately equivalent charge of a firecracker and can still be live.

And also, as far as background, you know, there are Aerojet officials here and McLaren Hart. And I realize it is hosted by DTSC. And this meeting is mostly for remediation and that is great. But I think a lot of these questions that were asked tonight, I think people could have been soothed or calmed by Aerojet officials if they had an opportunity to answer. But, you know, that's just a comment I am making. But I realize this is definitely a DTSC hosted meeting.

And then also I would just like to ask if the channels of communication be left open with Chino Hills Champion. We had delivered to every doorstep in Chino Hills and Chino. I would just like -- you know, Aerojet is very good at calling us back and DTSC. Just the only comment that I would like to make is that we do, when we call the DTSC, it goes through Sacramento. And Ron Baker has been very good. But there is channels that I can't talk directly to. If I call the DTSC, they refer to Ron Baker, and then Ron Baker calls, which is fine. But there is just extra channels.

And then when Aerojet, I do speak with Don Vanderkar frequently, and he is a public spokesperson. But sometimes I would like to be able to talk directly to Don Vanderkar. But he is an expert in the environmental areas and he is very, very helpful with us. And I think the more communication we give to the community, the better. Because, the lack of communication is what causes fear and rumors. And I think Aerojet understands that the more they get out, the better. I really do. And I

think they have been really helpful with us. Sometimes I would like to be able to maybe just go straight to Don, and no offense to Judy, because she is really helpful. But sometimes I would like to go straight to the horses mouth and get some of the answers. And the only reason I am asking that publicly is because we are the paper that goes to every Chino Hills' residence. And we are trying very hard to keep them informed of Aerojet and all the issues that surround that. So I would just like to ask you, to thank you for being open with us today and ask you to continue to keep the communication lines open. Thank you.

MR. SENGA: *Thank you very much, Marianne. We intend to continue the communication lines. It is our intent. I am glad to hear that, you know, we have been able to do that and we intend to continue to do that. And I want to encourage you, and the community to, you know, the information that is relative to the work that we are doing, you can share with us and that is going to help us.*

DTSC and Aerojet have kept and shall continue to keep open lines of communication with the Chino Hills Champion and other media who do provide much information to the local residents.

MARJORIE MIKELS: *What's your phone number?*

MR. SENGA: *My phone number is (818) 551-2840. And it is also in the -- in the fact sheet that has been provided.*

MR. RIDINGER: *You don't have an 800 number?*

MR. SENGA: *No, because the State of California does not give a number that I can use.*

MS. TAMOUSH: *Before I call the last speaker, is anyone else planning to submit a comment card? The last speaker is Heidi Kerr.*

Both Mr. Senga and Ms. Brown are now located in the DTSC Cypress office. Mr. Senga's phone number is (714) 484-5315 and Ms. Brown's number is (714) 484-5382.

HEIDI KERR: *It has been well established that we have a hazardous waste problem. We know there has been contamination found in various areas, water surface soil, et cetera, that is being addressed also. My request is Aerojet has been there for 40 plus years. There must have been at least, we feel as citizens, some contamination that has already taken place upon some citizens. I was wondering, can the State Department of Health be brought in and questioned? Are we at abnormal rates of any types of cancer, especially a good place to start is childhood cancers, because it's easier to track. And are there any current cancer clusters done on any type of cancer, especially childhood? And can there be research done on maybe thyroid problems, miscarriages, or anything of that sort?*

MR. SENGA: *I am sorry. I was talking with him. They were conversing with me.*

MS. TAMOUSH: *I think I can summarize your question. If I get it wrong -- she is asking whether the State Department of Health can conduct a cancer cluster study and any other illness, and are there any taking place.*

HEIDI KERR: *In other words, as a community, it would be nice to have the State Department of Health called into our community so that questions can be asked and surveys taken so we have information and data. And especially when I think about it, as far as children being a new area. That would be a great place to check for childhood leukemia or any childhood cancers to see if they are more elevated than normal areas should be.*

MR. SENGA: *Thank you.*

The Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center evaluated the occurrences of childhood neuroblastoma, childhood cancers and adult cancers in the Chino Hills area. The study concluded that there was no evidence of an increased cancer rate for any of these cancers in the Chino Hills area. A summary report of these findings is available for review at both the Chino Hills library and at the Department of Toxic Substances Control office in Cypress. In addition, you may wish to speak with Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at (909) 799-6181. Please see the response to General Comment 2 for further information.

AN UNIDENTIFIED SPEAKER: *Will you also address the Aerojet people? They were all in a little puddle over here in what they were saying. So we as a community would like to know --*

MR. SENGA: *All he --*

AN UNIDENTIFIED SPEAKER: *All he kept doing is smiling and shaking his head. We have been watching him.*

MR. SENGA: *I will do that right now. Aerojet, he is right behind me. He wanted to know -- he asked me whether or not it would be okay for them to address the community. And my answer was no, not at this time. I would like to, at the end of, once I receive the comments from the community, if the members of the community would like us to, you know, would like to stay to have a discussion to talk to Aerojet, that will be fine. But obviously as part of the comment, if Aerojet wants to make a comment, they will come to do that.*

CAROL DOBRIKIN: *May I say one thing? I was wondering if we can have another meeting. It is getting awful late. We have got people here that are really diehards. Can this be continued or can we have another meeting so that Aerojet people can then do just what was said? We really need more communication with everybody as to what is going on. And also, Ed Graham, one of our City Councilmen of our new city, which is about seven years old, has just been diagnosed with a cancer. They don't know the cause of it. And he is downwind from Aerojet, lives in Butterfield.*

MR. SENGA: *Thank you.*

Two additional meetings were held during the public comment period. Aerojet held a public meeting on May 25, 1999 in which many of the questions were verbally answered. Another meeting was held on June 7, 1999 at the City of Chino Hills Council chambers in which the community had an additional opportunity to ask questions.

HEIDI KERR: *Heidi Kerr. I would like an answer to my question regarding the State Department of Health.*

MR. SENGA: *Okay. Let me -- the Department of Health Services, you know, obviously they have a different mission and responsibility than we do. I am aware that one of the units, one of the purposes of the Department of Health Services is involved in the Aerojet site branch. I am aware of that.*

MARJORIE MIKELS: *Have they done health surveys?*

HEIDI KERR: *The State -- Heidi Kerr. The State Radiology Department of Health is a completely different area that I am talking about health, as far as the welfare of children and cancer control and*

all those types of things, not just looking at radiation. In other words, you are here to assist us. How can we get involved with the part of the Health Department that looks at disease control, I guess you can call it?

MR. SENGA: *That comment, your comment, or the comment that related to any other agency, that information will obviously be passed on to that entity. And in this particular case, these comments, the comment or the request that you made, that information will be passed on to the Department of Health Services also.*

MARJORIE MIKELS: *But do you know whether any health assessments, health surveys, have been done for the Aerojet surrounding site?*

MR. SENGA: *We do have in the audience a member of the Department of Health, the Department of Toxic Substances Control, toxicologist. And maybe he can make a comment on that. Would you like -- can you comment on that?*

DR. YUGAL LUTHRA: *I am a toxicologist with the Department of Health Service Ecological Risk Division. As far as I am aware, the Department of Health Services is not involved, to my knowledge, because I am not looked at very actively. They do have a department of epidemiology which can do the things which this young lady has requested to look into.*

HEIDI KERR: *Heidi Kerr. As with that information, can you help us involve that part of the Department of Health?*

MR. SENGA: *I can pass the information, those comments, over to the Department. Obviously, any member of the community, any member of this community, we can provide. It is just a matter of the address, the address of the Department of Health Services. We can provide that to the community so that the community can have that.*

Please see the response to your earlier comment on page 165-166 and the response to General Comment 2.

DICK RIDINGER: *Dick Ridinger. I would like to know, the question was asked, can we adjourn to another meeting? I suggest next Wednesday night.*

AN UNIDENTIFIED SPEAKER: *I think it should be answered right now. Just a continuance.*

MR. SENGA: *There is no -- in order to, I need to -- obviously everybody in the community needs to be informed. They need to be informed of a meeting. I think we will then need to make sure that everybody is aware that there is another meeting, and if another one is, if we have to do another one to go through and make the announcement and notify everybody this way that people can come and provide the comments. So --*

DICK RIDINGER: *So next Wednesday would be out? The Wednesday after that, so the newspaper could publish?*

MR. SENGA: *Again, the Department of Health can go and notify, mention to the community, just like we did, we went through prior to this. We put a notice in the paper. We also sent notices to the community about the meeting.*

DICK RIDINGER: *This would just be a continuation of the same meeting. So it is not a new meeting.*

MR. SENGA: *Okay. I still have to notify the members of the community about that. That, you see, that is something that I would have to do. Because if I hold a meeting with just the people in this room, then obviously I haven't received the comments of the community, you know. There is a lot of other people out there that may also want to do that.*

AN UNIDENTIFIED SPEAKER: *Well, if you notify the press that there is going to be a meeting.*

JUDY MORTON: *Right now the comment period is to May 20th. Now, can that time period be extended so that we can get another meeting in? So if the public comment period ends on the 28th, that isn't enough time to notify the people in the community for another meeting. And then therefore allowing them to be able, maybe they couldn't make it tonight. Maybe they work nights. I know people said they couldn't be here because they had to work. And so maybe if they extended -- the period was extended past the 28th so that we could allow that time to notify people, to send out another mailer and let them be able to come.*

MS. TAMOUSH: *You may recall, Mr. Senga said he would like to, that he would ask management. This is part of a formal legal process, and what you are calling continuing the meeting, we would have to re-notice it, then we would have to run that comment period again.*

AN UNIDENTIFIED SPEAKER: *You can extend the comment period.*

MS. TAMOUSH: *That is why he is suggesting that he would look into getting it extended for the --*

AN UNIDENTIFIED SPEAKER: *Can the comment period be extended for another 30 days?*

JUDY MORTON: *Looking into it and having it is two different things. And if you don't have it, you are not using the public as a tool the way you want it.*

MS. TAMOUSH: *That's the way it is going to look. Those of you who are continuing to ask questions, please don't forget to say what your name is, please, before you begin speaking.*

JUDY MORTON: *My name is Judy Morton. And I just made the comment about extending the comment period for 30 days more past the 28th so we can get in another meeting or two, then everybody can be informed. Thank you.*

MR. SENGA: *Thank you.*

The comment period was extended until June 30, 1999.

HEIDI KERR: *I would just like the information on how to contact the Department of Health Services for everyone. And also I think we would all like to know the process of getting them involved, not just myself. But I'm sure there are many people here and in the community that would like that information. So I would ask that you do distribute it to everyone.*

MR. SENGA: *Again, this information, this is part of the comment. And that information will be part of our response to the comment to be distributed to those people who make a comment tonight. Those will be available at the repository at the end.*

HEIDI KERR: *Thank you.*

MR. SENGA: *Thank you.*

Please see the response to your earlier comment on page 165-166 of this Response to Comments.

MS. TAMOUSH: *Anyone else wish to make a comment?*

DEBORAH PETERSON: *Deborah Peterson. And I'm sorry, Mr. Senga, I forget when you said we would be receiving these comments back in the mail? When will we be receiving your answers?*

MR. SENGA: *Okay. Okay. I said that the comment period ends on May 28th. After May 28th, we will then evaluate all the comments. Normally, it would take 30 days or more, depending on the comments that are being received, based on tonight's comments. There is a lot of comments, so I'll say at least 30 days.*

Due to the number of comments received it took longer than 30 days to provide this Response to Comments.

DEBORAH PETERSON: *Yes, sir. Because I feel that if I had your answers in the mail, my comment period might go on a little further. I also request for the record that the comment period be extended. And I am asking you that would it behoove us to put that into writing. Is a written request any better than just being here stating it publicly that we request as the public?*

MR. SENG: *Any comment that is made here is being recorded so that we can make sure that we have the comment on record and we can respond to it. You can submit your comment in writing also, but the comment, whether it is written or stated, it will be taken the same way.*

DEBORAH PETERSON: *Thank you for teaching me that.*

STEVEN HOOD: *My name is Steven Hood and I just have one quick question. I am very curious to know if there is any other Aerojet facilities that have been recently through this cleanup process, and whether there have been any of these health assessments done in the local community. And I am just curious if there has been any recently in the last ten years that you are aware of.*

MR. SENG: *At the moment I don't know that information. I have to go through and find that information. I will do that and provide that information.*

STEVEN HOOD: *Thank you.*

MR. SENG: *Thank you.*

Aerojet has no other ordnance test facilities in California. However, other military sites and defense contractors in California have active or former ordnance operations. For sites under our jurisdiction, DTSC performs health assessments of the facility operations only if the operations require a hazardous waste facility permit. If the site is closing, DTSC performs a baseline health risk assessment (evaluating present site conditions) and evaluates health effects of the cleanup measures. DTSC does not perform health assessments of the community; this expertise and legal jurisdiction lie with the Department of Health Services, Environmental Health Investigations Branch. Please see the response to General Comment 2 for information on a health study conducted in the Chino Hills area.

JOSE PALOMO: *My name is Jose J. Palomo, III, and I called and talked earlier this evening. I was trying to see if we could possibly have another meeting before your deadline, like on a weekend, and with some of those City Council members, as well as the neighbors, like let's say Los Serranos Golf Course or Western Hills Golf Course. Those of us that missed it tonight can attend it as well as us here tonight to hear more concerns, address more concerns. Because I don't think most of our questions were answered, and in the manner that we should have. I am wondering if you can bring it to management. Maybe you can bring some of the city officials to our next meeting. Like, you know, maybe we can set it like on a weekend so we can all get-together, for the children and parents of our community. Thank you.*

Two additional meetings were held during the public comment period. Aerojet held a public meeting on May 25, 1999 in which many of the questions were verbally answered. Another meeting was held on

June 7, 1999 at the City of Chino Hills Council chambers in which the community had an additional

opportunity to ask questions.

DARYL TAMEZ: *I am Daryl Tamez. I wanted to, once all these questions are answered and you were going to supply a copy at the library, we will receive a copy of our copy to our comments. But the entirety, you will --*

MS. TAMOUSH: *You will receive every question and every answer, if you either asked for it or if you have made a comment.*

DARYL TAMEZ: *Okay. Now for people that did not attend tonight that you talk to tomorrow or the next day or who would like to know about all of this.*

MS. TAMOUSH: *Those will be included. They are.*

DARYL TAMEZ: *You are only going to send me one copy. Let's say my brother down the road wanted a copy or wanted to know what we talked about, couldn't come tonight. You are saying there is a copy at the Chino Hills Library of the entire conversation here tonight?*

MR. SENG: *That's correct.*

DARYL TAMEZ: *Will that just be for viewing or can you buy a copy or can you take home a copy? Do you know if it is just going to be one copy for this entire city to look at that could not attend?*

MS. TAMOUSH: *What you can do in the library is either make copies of any document there, or, yeah, you would have to pay for the copies. There is a machine, I understand, in the library. Or let us know what you want copies of and if it is something that we can provide you, we will. And if not, then we will tell you what it will cost to get copies.*

DARYL TAMEZ: *It is not a problem. Thank you.*

THE COURT: *If the comment is can we have more than one copy of the response to the questions, yes, we can. We will do that. Let the record show that we will provide more than one copy.*

DARYL TAMEZ: *A reasonable amount?*

MR. SENG: *Yes.*

DARYL TAMEZ: *Okay. Thank you.*

DUANE THOMPSON: *My name is Duane Thompson. I just had a question about this process. Basically, I guess there were other public hearings earlier on this. And I would just like some background of when the previous public hearings were, and are the comments from those previous public hearings available for us?*

This is the first Public Hearing on the Corrective Measures. A separate public comment period was held for the Closure of the OB/OD area in spring of 1993. No public hearing was held because community interest was not high at that time. Public comments were received and responded to. Documents on the OB/OD project are available for review at the Chino Hills Library and at DTSC Cypress, California office. Please see Section III for further information.

And in regards to the timing of this public hearing, remediation has been going on for quite a long time now. How do you determine when you schedule public hearings in regards to, you know, during remediation process? I would just like some information on, you know, what this hearing really does and, you know, what the timing of the hearings are, you know, how our input gets used. And I know that, you know, you are wondering I had a question. I heard someone say like is it going to even

happen. You know, the level of cleanup, what does that mean? I mean, I am really kind of curious about the process. So I am sorry it is a general question, but I would really like some good background.

MR. SENGA: *Okay.*

The two other ongoing remediation projects (separate from the Corrective Measures) that have been taking place at the Aerojet Facility are the cleanup of depleted uranium based on radioactivity under the oversight of the Department of Health Services, Radiologic Branch (DHS) and the Closure of the Open Burn/Open Detonation Area under the oversight of DTSC. The guidelines for the DHS cleanup process are described in the response to comments made by Ms. Judy Morton (question #3) on pages 65-66 of this Response to Comments. In addition, an underground storage tank was removed in November 1998 under the oversight of the San Bernardino County Fire Department.

One key goal of the public hearing is to create a two-way communication between the community and DTSC so that we have a very informed and educated community and we make better decisions to address community concerns. The public hearing is held so that community concerns are heard and that the final remediation plan addresses those concerns as best as possible. For further information on DTSC's process, please see the response to General Comment 1.

The Corrective Action cleanup project will take place because it will protect human health and the environment. By removing the contamination from the site, both wildlife and people who will be present on the site will be protected from explosive chemical hazards and/or unexploded ordnance in soil.

MARIANNE NAPOLES: *My name is Marianne Napoles. I am a reporter for the Champion. And I could just speak on a couple of those issues on just what I observed. It's been such a long gap of time between this public meeting and the last one that, there is -- it is kind of a jolt to some people. But a couple of years ago there was a public meeting with the City Council and the Planning Commission. It was a joint meeting where Aerojet's officials asked about remediation and cleanup levels. And their ultimate goal was to put homes there. And of course they needed to know to what level of cleanup should they do. They are not going to want to do one hundred percent level cleanup if they are not going to put homes on it.*

So a couple of years ago they did approach the City with numerous questions and a couple of meetings were held. And Aerojet met with many members of the community and they held a public hearing at Ayala High School. Ten people showed up. Less than ten people showed up. And I think the awareness has just finally caught up, I think, to the community between those meetings so many years ago and this meeting now. Because now is the time when the depleted uranium has been, you know, removed. And they are at the point now, where this is the point now that they have reached at this point now where the DTSC is here and reporting. And it has just been such a long gap of time. And I think that's why a lot of the public is a little confused.

And like I said before, I think if the Aerojet officials had been given more opportunity to answer, a whole bunch of prospective information could have been brought out tonight. Again, I understand it is a DTSC hosted meeting, and that's the reason why.

AN UNIDENTIFIED SPEAKER: *We have lived in this area for 18 years. This is the first time, and we are right by Aerojet. So anybody when they go up to Aerojet, we can see who goes up there and all the activity. This is the first meeting that they have ever been invited to. We did not know that there was another meeting. I was floored that they had a meeting two years ago in their garage. We are right there. We see the bomb squad. We see the fire department. Aerojet has their own Fire Department. I mean, they are lined up. They block us off. We can't even get out of our street. We have been blocked off so many times.*

DTSC acknowledges that the community has had concerns and questions regarding the past operations of Aerojet, and some of the emergencies and incidents that have taken place at the facility involving blockage of streets, sirens and other incidences. However, the site is now closed, and the focus of the present project is on the site cleanup and the Corrective Measures. DTSC has done several community outreach activities in the past, including a community survey in Fall 1996 in which questionnaires were mailed to a number of residents, and a fact sheet in Summer 1998 which was also mailed to a number of residents. We regret that the previous outreach efforts did not reach all those who have concerns regarding the site. However, after the public hearing, two additional public meetings, the establishment of a repository to place present and proposed clean-up documents, the letter sent to the community in October 1999 and August 2000, and this Response to Comments, DTSC is committed to maintain a diligent effort to provide the community with adequate information regarding the cleanup activities at the site. DTSC will provide additional information on the progress of the Corrective Measures, including advance notice to the community with respect to the proposed dates of truck traffic and any necessary detonation events. DTSC welcomes the community to call any of the DTSC project personnel listed in Section III of this Response to Comments with any additional questions or comments you may have.

And I have called Aerojet. I just give up. And I call the police department and then the police department has got to call me back. So they call me back and then Aerojet -- finally somebody from Aerojet, a woman or somebody, will call and say everything is under control, don't worry about it. We found out somebody died. They got -- you know, in those explosions. One was airlifted. He got his arm was -- his hand was blown off. I mean, there is not too many things that go on that Aerojet won't tell us. But we do see all the activity. And this is the first meeting that we have ever, ever been invited to.

Please see the response above.

MR. SENG: *Let me just say this. This is the first meeting. This is really not a meeting. Actually, let me make a correction. This is a Public Hearing. There is a difference between the meeting and the hearing. This is the first Public Hearing that has been held by the Department pursuant to the cleanup. There has been -- there was a public notice for the closure that was done by the Department some time ago, but this is the first Public Hearing that has been, that the Department has held in order to receive comments on the cleanup.*

AN UNIDENTIFIED SPEAKER: *So when you go out -- can I make a statement? When you go out to do the cleanup, can we be notified? We are right on the street. I'm sure the people that -- we are right there and we would like to know when the cleanup is going to be, you know, the time of day or whatever.*

The community will be notified of the approval decision for the Corrective Measures and of the time frame when field work will begin. Field work is expected to take at least three to four months to complete. The community will also be notified in advance via an advertisement in the local newspaper (Chino Hills Champion and/or Daily Bulletin) of the time frame during which trucks will be transporting contaminated soil off-site, and of the time frame regarding detonation of ordnance. Please feel free to contact any of the DTSC project personnel listed in Section III of this Response to Comments with any additional questions or comments you may have.

When you think about it, all these things are falling into place. We had a wall that moved. We had walls that have moved. They are continuously -- if they told us before we bought up there, bought the land and bought the house -- they should have told us. We should have been aware that we are sitting on a toxic or a bomb thing. I mean, you could hear the -- you could hear them go off all the time, the explosions. We got so used to it. Now when people come over, they would say "What is that?" And we would just say, "Oh, it is just Aerojet. They are bombing. It will go away." But, you know, our block wall, there is a big crack. We don't know what happened. But nobody would tell us.

As mentioned in the response above, DTSC acknowledges the community concerns regarding Aerojet's past operations. However, the facility is now closed, and the focus of the present project is to clean up the facility from hazardous substances and to implement Corrective Measures. At present, there is no danger to the off site community from present site conditions (please see the response to comments made by Mr. Andre Hernandez on page 21 of this Response to Comments). Cleanup of the contamination at the facility will result in the elimination of hazards at the site.

You know, the health problems that we have up there. The congestion, the health problems. There is so many people around. I have never seen so many people dying of cancer, and animals, you know. And it is just really bad, you know. And you guys, they are going to go out and do it. We need the Health Department, you know. I mean, I wish they would have told us before we bought up there.

During the summer of 1999, Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center evaluated the occurrence of cancer in the Chino Hills area. The results of the study indicate that cancer rates are not elevated. Please see the response to General Comment 2 for further information.

I would have never ever bought on a toxic -- if I would have known they were going to do bombings, we have had so many times on our street, I can go back to the police department and I can get all the times. Because I called every time. I called them. You can go back and get the records of how many times our street was closed. We couldn't even get out. Luckily the home at the end has a driveway where we can drive through his garage and get out. But that's upsetting to me. They should have notified us before we built 18 years ago. We are right there. There isn't anything -- we see everything

that goes on. I see all the trucks. And all these trucks have been moving dirt for a long time. It is not just something that has -- that happened. They have been moving it.

MR. SENGA: *Thank you.*

As mentioned in the response above, DTSC acknowledges the community concerns regarding Aerojet's past operations. During the time the facility was operating, accidents have occurred and emergency response personnel may have blocked streets or limited vehicle access. Since the site closed in 1995, truck traffic to and from the facility are results of a number of different activities, including hauling hay and other materials related to cattle, and oil products from the oil drilling operation on the site which is not related to Aerojet. At various times, trucks have transported contaminated soil from the facility. This has occurred during the closure of the OB/OD area, the removal of an underground petroleum storage tank, the removal of soil contaminated with depleted uranium and once as a result of the site investigation. For further information on these truck activities, please see the response to questions 8 and 10 of Judy Morton's May 28, 1999 letter on pages 51-52 of this Response to Comments.

AN UNIDENTIFIED SPEAKER: *How much dirt has been removed?*

MR. SENGA: *That information is in the RFI report. There is the exact number. I cannot right offhand give you the number, but I can get that number. The number is also in the document.*

The estimated amounts of soil are: 1700 tons of RDX-contaminated soil removed from the OB/OD area, 1432 tons of soil contaminated with petroleum hydrocarbons/MTBE from the underground storage tank, 3100 tons of soil contaminated with depleted uranium, and 364 tons of perchlorate contaminated soil from Upper A-12 test area.

DARLA HELMS: *Darla Helms. What report did you say?*

MR. SENGA: *The big document on the cleanup.*

AN UNIDENTIFIED SPEAKER: *Okay. What I am talking about is the document that is involved for public review.*

HEIDI KERR: *Heidi Kerr. And I was just wondering, by chance, the gentleman that works for the Health Department, in your division, would you happen to know if it was the epidemiology department of the health branch? Would you have any of that information tonight for those of us who would like to contact them very soon?*

The Department of Health Services, Environmental Health Investigations Branch is responsible for conducting cancer surveys and other epidemiological studies. As explained in the response to General Comment 2 of this Response to Comments, a cancer survey was performed and found no increased rate of cancer in the Chino Hills area.

DR. YUGAL LUTHRA: *You can look through DTSC. I have no direct affiliation with the Department of Health Services. They are a different issue to us. DTSC, they deal with human health concerns.*

MR. SENGA: *Thank you.*

MS. TAMOUSH: *Any further comments? I would like to thank everybody who shared a comment with us, or a question this evening. This will conclude our hearing. Mr. Senga, can you give us a*

time, please?

MR. SENG: *The time is now 10:47.*

MS. TAMOUSH: *Let the record show that this hearing for Aerojet Chino Hills is closed at 10:47.
Thank you all very much for coming.*

(The hearing was concluded.)

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VII. RESPONSES TO COMMENTS FROM THE JUNE 7, 1999 COMMUNITY MEETING

On June 7, 1999, a community meeting was hosted by the Chino Hills City Council to provide an opportunity for members of the community to ask questions and receive answers regarding the proposed corrective Measures for the Aerojet Chino Hills Facility. Mr. Doug La Belle, City Manager, submitted the transcript of this meeting to DTSC. Some of the questions were adequately responded to in the meeting. Text marked in bold identifies comments made by the moderator of the meeting (City of Chino Hills). Text marked in bold italics identifies questions asked by City Council Members or the public. Comments and responses to questions made by speakers (DTSC or Aerojet and McLaren/Hart) are identified in the transcript by plain text (no bold or italics). DTSC is providing clarifications and additional responses to some comments, based on the responses to comments provided by the public in Section V and at the public hearing in Section VI of this Response to Comments. Each comment for which an additional response is provided is identified by a handwritten bracket in the left-hand margin, and a number is provided beside the bracket. The transcript of the meeting is provided in Section A. Responses to the comments are provided in Section B following the transcript of the meeting.

A. TRANSCRIPT OF MEETING

Good evening, ladies and gentlemen. On behalf of the Chino Hills City Council, we want to welcome you this evening. We'll call the meeting to order and have roll call.

Mayor Larson?

Here.

Mayor Protem Wickman absent.

Council Member Graham absent.

Council Member Norton-Perry?

Here.

And Council Member Thalman absent.

Let me make just a couple of announcements. We have three Council Members, two of them have just had recent operations, and that is why they are not here this evening. Ed is doing very well from his cancer surgery and is coming along very well. I've talked to him several times and wish that he were here this evening. Jim Thalman had a total knee replacement last week. That's why he's not here this evening, and Mike Wickman I guess is not fully recovered. He's under anesthetic right now, just coming out of it for exploratory surgery, so we're dropping like flies. I'm glad Gwenn and I are at least healthy to be here tonight. So that's to excuse them this evening; that's why they're not here or they would be here. Since we do not have a quorum, I will not be running the meeting per se. We'll turn it over to the City Manager Doug La Belle to run the meeting. And I would like to just make a couple quick comments. Number one is, we're here to listen to your questions. We want to get as many answers as we can. When you come up, we would prefer if you could

not make a huge presentation but ask your question, so as many as could ask the questions as possible. Many of you have been to all three of the meetings before, so that's just courtesy. If we have time, we can go back through if you have other questions afterwards. With that, Doug, we'll turn the time over to you.

[Doug La Belle speaking} Thank you, Mayor Larson. I'd like to just very briefly set the stage for the public forum over the next couple of hours or so. The objective is to allow as much time as possible for questions and answers on the part of our residents and other interested parties. The format, although this is not, quote, an official council meeting, my intent is to follow the same format as on the agenda where we will have a presentation by DTSC, a presentation by Aerojet, some brief comments by our city water staff, our water consultant at RBF, and then allow questions by the Council Members present this evening and then a question-and-answer session with our residents. To set the stage, I'd like to, and I know this is going to limit the comments by DTSC and Aerojet, but we'd like to ask you to keep your presentations to 20 minutes to keep it focused. Between Linda and I, we're going to try to crack the gavel and move it along, so that we can, in turn, have enough time to allow for questions and answers. To set the stage, the Department of Toxic Substance Control, the State agency, is responsible for the protection of public health and the environment from threats posed by hazardous waste. Two of DTSC's functions are, and I'm sure they will correct me if I'm wrong and elaborate on this, is to establish regulations and requirements for the safe storage, transport, treatment and disposal of hazardous waste and to oversee the investigation and remediation of sites that have been contaminated by hazardous substances. Their presentation will focus on that. The City of Chino Hills, once that process is concluded, whenever it may be and whatever it entails, the City's responsibility, the council and staff, is to oversee any site plan review, any tentative tract map review and design review and related environmental review on any project that may be submitted for consideration through the normal planning process as with any other parcel of land in the city. DTSC as a State agency is responsible for reviewing the plan for cleanup and reclamation of the site. Once the site is certified by DTSC, then the applicant may submit a project proposal to the city for review and determination. Then at that point, the city would be responsible for processing project application. What I'm going to do is introduce the lead presenter from DTSC, and then let them allocate their 20 minutes as they see fit. Jim Markson is the Branch Chief. If you'd like to introduce your group and take it from there. We'll ring the bell at the appropriate time.

[Remarks by Jim Marxen, Branch Chief, Public Participation, DTSC] Good evening, Mr. Mayor and Councilwoman. I hope that the health concerns of the city council improve. Thanks for inviting us, City Manager La Belle. I've been asked by our director, Ed Lowry, to present our staff tonight from the Department of Toxic Substances Control and give a very brief presentation of our role in this process. As the handouts say, I am Chief of the Public Involvement program statewide for the Department, and my phone number is there. I'd like to introduce the rest of team. They are Robert Senga, our Unit Chief, and his number is there. Christine Brown is a Project Manager; Christine is right next to him. Vicki Lamoush is up here with up here with me, our Public Participation Specialist who many of you have probably already met. Dr. Yougel Uthra, our toxicologist who also is having health problems tonight and was unable to make it. He is out of the country attending to his health problems. We also have Paul Carpenter, our geologist. We also have a couple of other folks in the audience tonight to answer any questions if they come up in their area. Public involvement is a very big part of our program. Ed Lowry, again our Director, has made it a cornerstone of his administration. In tune with that theme, we

had received a letter from the City manager a couple of weeks ago asking that the comment period for this project be extended. We have done that. We have actually reopened the public comment period for this project until 5:00 PM June 30, 1999. Your written comments should be directed to Vicki, and the address for Vicki should be in the handout. They should be received by then, but we do give people a couple of days if they're late, if they're postmarked then. We would like to have them because we need to get public comments together and begin response to comment period so that we can respond and take the time to research your questions and get answers out to the community as quickly as possible. I won't go over these individually, but what we have done is initiated a public involvement on this site. Some of the objectives are there. The key one, of course, is to create a two-way communication between the community and the Department of Toxic Substances Control so that we have a very informed and educated community and that we make a better decision. So we really do invite your comments on this project. Some of the things that we have done in the past, and you've probably all received them, are fact sheets and letters. We've held a public hearing on this project. We also have an information repository (I think it's right here in this complex.) We've developed a mailing list for sending fact sheets out. If your name is not on the mailing list or you haven't been receiving fact sheets in the past, please let Vicki or any one of us know before the end of the meeting, and we'll make sure you're on that mailing list. We also have a public comment period that has been extended, as I mentioned. What we're going to do tonight, is very quickly, Robert, is go through an overview of the process that we have for corrective action. We're going to discuss the cleanup options, and of course we're available for questions. So with that, I'd like to hand it over to Robert Senga.

[Remarks by Robert Senga, Unit Chief, DTSC] Thank you, Jim. Good evening everybody. As Jim said, my name is Robert Senga and I am the Project Supervisor for the Aerojet project in Chino. As Jim said, we're going to talk about the corrective action, and I just want to give you a brief explanation of the process because I know that the last time, during the public hearing on May 13, there were questions about the process. I just want to make sure that everybody gets a feel for what the process involves. So tonight we're going to talk about the process, the statutory authority that governs the corrective action and give you (INAUDIBLE) process. Again, the purpose of corrective action is to identify and to evaluate the nature and extent of contaminants at a site, and also to develop the appropriate remediation measures that would be necessary in order to protect public health and the environment. Corrective action is governed by the rules of the Health and Safety Court, section 25 187 and also the regulations in Title 22. It covers all releases from a site and basically all the units where hazardous waste may have been released into the environment from. The authority for DTSC does and may extend outside the boundary of the property. It covers oil treatment storage and disposal activities that may have taken place at the site. I know some of you have seen this word "SWMU", and basically a "SWMU" is a solid waste management unit. What it is defined as is basically any unit or any area where the hazardous waste may have been released, regardless of whether or not the release was intended. The corrective action process has several steps, and these are the major ones. There are several other ones in between, but these are the main milestones. The first step in the corrective action process is an assessment which is called a RCRA Facility Assessment, the process of which is to basically identify areas which need investigation. In the case of Aerojet, this was done by the U.S. EPA back in 1992. The next step in the corrective action process is the investigation, which is basically the collection of information in order to determine the nature and extent of the contaminants in those areas that were identified in the RCRA Assessment. As part of the investigation, there is a risk assessment. I have the risk assessment done in order to establish the cleanup cause. The next one is the corrective measure study which is basically an evaluation of the alternatives, the technologies, and the different methods that would be needed based on the

contaminants that have been identified. The next item is the Remedy Selection, and in this case, this is where the Department, or DTSC, basically selects the remediation method based on the alternatives that were identified.

(INAUDIBLE QUESTION)

The corrective measure study is, in this case, an evaluation of different technologies and evaluations that would be used to clean up, to remediate whatever was identified in the investigation as requiring remediation or cleanup. After the alternatives are developed, then the Department selects one out of those or several combinations those remedies in order to get approval. This is really where we are right now. We are now at the Remedy Selection. That is a document that is presented to the public for comments. The next item is Corrective Measure Implementation, which is basically doing the work. The final step is the termination of the corrective action process. The approval of the corrective measures or the remedy is a discretionary activity by the Department and therefore it is subject to the requirements of the California Environmental Quality Act. In order to comply with these requirements, the Department is required to do an initial study, the purpose of which is to basically assess any environmental impacts which would result from the approval of the project, in this case the remediation. The Department did an initial study, and based on that initial study we had prepared a negative declaration and that document is available for comment. Again these are basically the steps in the process: the RCRA, the CAO which is the Corrective Action Order. This is basically the agreement between the Department and Aerojet for Aerojet to do the work. After the Department selects the alternatives, then basically we do the corrective measure selection process, and then the Statement of (INAUDIBLE) which explains why the chosen remedy was selected. In the case of Aerojet, the remedy here is basically dig and haul. (INAUDIBLE QUESTION) In the case of Aerojet, there is only one remedy which is the excavation, the digging up. Again, our objectives are basically to remediate and to control the resources and also to comply with the objectives of the cleanup. In the case of Aerojet, the cleanup goal is a health risk base number. Basically, this number is arrived at through a risk analysis, and that is how you set what the cleanup goal will be. Again, our intent is to protect human health and the environment. The review and setting up of the cleanup goal is done by the geologists, the toxicologist and a variety of team experts within the Department, so this is not something that is done by one person. In summary, the corrective measures that are proposed for Aerojet, the source cleaning in order to remove the fragments and then the removal of the contaminated soil and transport that offsite. Thank you.

I think that was well within our twenty-minute time limit. Thank you very much. I'd like to ask, I believe, Don Vanderkar, Director of Environmental Restoration for Aerojet, the lead presenter here. Again, we'd like to ask you to keep it to twenty minutes so that we can get to the questions and answers. Again, for any of you that may have come in in the last couple minutes, there should be some slips back there. If you'd like to speak on the matter, please fill out one of those, and our City Clerk Linda Ruth will get you in the queue to do that. Don?

[Remarks by Don Vanderkar, Aerojet] I will be speaking on a variety of subjects as soon as these viewgraphs are legible. Let me make a couple of general comments. There are basically three reasons why Aerojet must proceed and remediate the site, and do it as thoroughly as possible. The first is, it's the right thing to do. The second is that Aerojet has a legal requirement to do so under the Resource Conservation Recovery Act (RCRA) which is administered through DTSC. Also, Aerojet has a consent agreement with the State of California to do the work. And thirdly, should the work not be completed, there is the potential for the site to become an attractive nuisance and for future liabilities to reside there. It has to be done as thoroughly and as

adequately as we can. A little bit about the site history, Aerojet purchased the property in 1954. Initially the site was a satellite facility for testing of ordnance. In 1960 the site was expanded and it included the loading and assembly of a variety of ordnance at the facility. There were no manufacturing of components at the site. It was basically the assembly of the ordnance and also the testing. In 1970, the site use was expanded to include research and development, using small laboratory quantities of various compounds and chemical agents under very controlled conditions. In the 1980s the site was expanded further with additional assembly operations, packaging, and testing. The site was closed, shut down, and all operations ceased in 1995. The operations that had to do with depleted uranium. There was never any manufacturing of depleted uranium at the site, only the testing of depleted uranium projectiles. In terms of regulatory compliance, the regulatory oversight of the site really began back in the 1970s when the regional board was in charge of discharge from the site. The regional board oversaw the removal and decommissioning of the two caustic ponds that are at the site. The role of the State first started back in the 1980s. In 1984 DTSC became involved in the permitting of the units at the site, and then in 1991, site investigations were conducted, as Robert Senga mentioned earlier, by the Federal EPA, and a site assessment occurred. In 1992, the EPA published its preliminary assessment, work done by Ecology and Environment, Inc. That report was issued then. Closure activities actually started in the 1993-94 time frame with the startup of the closure of what's called the open burn-open detonation area, and this work is essentially complete. There is some confirmation sampling necessary before that site can be closed. I mentioned that there is a signed consent decree with the State of California Department of Toxic Substances Control that was signed in 1994. Following that activity, Aerojet recruited, sought résumés and proposals from consultants, and after a process of review, retained McLaren Hart to be its consultant on the site. On a separate note, I mentioned depleted uranium earlier. The work of removal and cleanup of depleted uranium is a separate process, which basically follows the same format as the RCRA process that DTSC oversees. It has to do with first assessing the site, doing a thorough site investigation, and then doing cleanup using Geiger counters and soil sampling. It's all done through the use of independent consultants. Another branch of the State of California in the Department of Health Services in the radiological health branch, oversees that activity, reviews all reports and then actually comes out and does their own sampling and testing of the facility before they accept it as closed.

[Remarks by Hassan Amini, McLaren/Hart] Before I start my presentation, I would like to thank the City of Chino Hills on behalf of McLaren Hart, Joe (INAUDIBLE) and myself. It's a great opportunity to share some of our findings with you at this point. I just want to put a couple words here. Don Vanderkar mentioned that they selected after an interview process McLaren Hart to do this investigation. It is very important to notice that McLaren Hart is a capable environmental company with 350 professional staff located in 12 offices nationwide. We have performed and conducted consulting investigations and remediations for some very sensitive sites from Love Canal, the first Superfund site in the United States to Shringfellow right here in our backyard. There is a tremendous respect between McLaren Hart and the regulatory community, and that comes basically from our technical strength. Also, it is important for me to mention that we have been committed to this project since 1995 in February when we signed a contract with Aerojet and we knew that this was a very important task. Joe (Bahde?) and myself have been constantly on this project along with many people that have supported us from various areas of expertise that I mentioned in the slide. Also, I would like to get on the record here and mention that I have personally reviewed, commented and certified every single document that McLaren Hart has produced for the Aerojet Chino Hills site. My registration with the State of California qualifies me to do that, and I have been a constant and involved member committed to this project. Mr. Senga reviewed with us what the requirements of RCRA are for the project, and I

wanted to simply translate to what DTSC expected and required McLaren Hart to do for Aerojet. They said go and determine the lateral and vertical extent of any chemical impact on soil or any media, and tell us about it. Tell us about the recommendations or evaluations based on the data and information that you have collected. Make sure that the information that you collect is suitable for conducting risk assessment and preparing this project for remedy. Our approach to comply with RCRA as implemented for this project has been to identify any potential area of contaminant release at the site. To do that, we have reviewed the company files. We have interviewed in both formal sessions and informal sessions approximately twenty individuals at various occasions. We have looked at aerial photographs and the company files. We have looked at every single piece of information that we could get our hands on to find what areas have some potential for release of chemicals. Once we determined those, which ends up to be about sixteen Solid Waste Management Units and thirteen Areas of Concern, we have characterized the presence, the lateral and vertical extent of that contamination to soil and surface water if there is any. We have identified the path of migration, if any, to see where these chemicals are moving. If they are on the surface, are they mobilized by surface water. If they are in the soil, how deep will they go and what is their mobilization nature. We have considered potential receptors, and that is the human, the flora, the fauna, any living organism in any form that can be in a path of the migration of these chemicals and be affected by that. We have gathered all that information in order to perform a risk assessment and prepare this project for the corrective measure action that we will review with you in a second here. I think, when we talk about path of migration it is very important we understand that geology and nature of the rocks and sediments underneath the facility as well as the regime of surface water and ground water. Is there any ground water, what form does it take, and what are these seepages along these hillsides that are seen throughout the Chino Hills. To review that, simply, we are taking the work that has been by the U.S. Geological Survey, a geologic map of the Chino Hills area put together by USGS. As you can see, there is a contrasting difference between the base and field sediments that are shed from all these mountains and hillsides. Those are the Chino Basin sediments that they are very porous and the host of ground water. That's where the production wells are. Chino Hills, by the Department of Water Resources map, is shown to be a non-water-bearing zone. In other words, it cannot produce a substantial quantity of water for production, and I think it's very important for us to realize that. The next slide shows you a cross section, a schematic cross section. This Soquel member and Yorba member, which are two members of Puente formation, and they extend from Puente Hills to Chino Hills, are more than 2,000 feet thick of sandstone, shale, and siltstone. These are very tight formations in that they don't allow seepage of water. In fact, they are so tight that they provide traps for oil reservoirs, and in fact you've seen all the oil wells along the hills. Also it is important that we look of the presence of very thin veneers of surficial deposits which are some cadus material, some alluvial loose sand and gravel at the bottom of the canyon. These deposits are anything from about 0 to about 20 feet thick. The significance of these is that they can take water, water can seep through these, and they can store a little bit of water. As the water hits this bedrock Soquel member or the Puente formation, they don't seep to depth anymore but rather they start flowing at the interface between these surficial deposits and the (INAUDIBLE.) So why is that important? Because that tells us if there is any release of chemicals to the soil and in what direction they are moving. They will not be moving downward, but rather laterally, and we understand the hydrology of the surface water regime of the area, I think we have a good handle on it. This is the watershed basin of the Soquel Creek that is flowing to the west toward the Carbon Canyon Dam. That is the boundary of the site. As you can see, all these blue lines are the tributaries to the Soquel Creek that eventually collect water and move in that direction. This divide basically divides the site into 80%+ of surface water moving toward the west and about 20% or less moving toward the City of Chino Hills area. All of that area that is drained by these two little gullies here are administration areas of Aerojet.

There have never been any testing or assembly of the material in those areas. This is the aerial shot, oblique aerial photograph. That's the boundary of the property right there, and this is that divide that I'm showing you. The dark lines here are the surface stream valleys. Because of the presence of those loose sediments, they are very good hosts for vegetation growth, and so you have the trees and bushes growing in these gullies basically. If you look at them, all these are moving towards the facility and basically they're coming toward the Soquel Creek, which is moving in that direction about 5 miles away, draining to Carbon Canyon Dam. Also, you can see that this divide right here separates hydrology of the site or the surface regime of the site from the rest of those areas. Joe is going to show us and talk about the sampling along these stream valleys, and there has been plenty of information. One thing that I want to mention here is that even though the Department of Water Resources does not consider Chino Hills to be a water-bearing formation, we cannot say that there is absolutely no deep water there. In fact, some of the older oil wells that have ceased production collect some water, but that water is extremely saline and it is never used for drinking purposes. With that note, I want Joe to come up here and share with you the details of our studies and all our samples that we have taken throughout the facility.

[Remarks by Joe Bahde, McLaren/Hart] Thank you Hassan. As Hassan mentioned and Don mentioned, McLaren Hart has been working on this investigation since 1995. In that time, we prepared many work plans and documents, all that have been submitted to DTSC, reviewed, commented on, and finalized. That work has been conducted and summarized in two reports. One is the RFI Report and the other is the RFI Addendum Report. All of these are over in the library, but they are quite a stack of documents so I want to go through the results tonight, summarizing what we discovered and what our proposed remediation measures are for areas where we have found impact. Through our investigations we have identified sixteen Solid Waste Management Units, and thirteen Areas of Concern at the site. We have collected over 1300 soil, sub-surface and surface water samples at the site, including (INAUDIBLE) samples, bioassay toxicity tests, immunoassay tests which are specifically for our primary chemical of concern, which is RDX, an explosive compound. Hassan mentioned some of the water sampling results through his hydrogeology talk. We have sampled 26 locations. All water sources at the site that we could sample were sampled. These include surface water samples, some seepages, two monitoring wells, two former oil well and a total of six sub-surface water samples. On this map, the green are our surface water sample locations. This is Main, this is Soquel Canyon Creek flowing down towards Carbon Canyon. You have a red here; these are springs. You have about 3-4 wells, and these are all sampled for all our chemicals of concern. These two drainages are the ones that are flowing down towards the residential area. We actually, after having one discussion with some concerned residents, went back and did sample these water locations, and we also collected some soil samples in those same drainages, analyzed for the chemicals of concern, which included explosives and chemical agents. All the sample results were nondetect. All the surface water sample results along this section here, we detected 3 compounds, perchlorate and two explosive compounds RDX and HMX. We conducted risk assessments using the maximum detected concentrations of these chemicals in the water, and we also conducted ecological assessments of those concentrations. Those studies demonstrate that the levels in Soquel Canyon Creek do not pose a risk to human health or to ecological receptors. We also have some perchlorate in (INAUDIBLE), and we have RDX around the Red Water Pond. We did the same risk studies on those, and the perchlorate does not produce a risk to human health, but as part of our corrective measures, we will still put monitoring wells in that area after we complete our remedial measures. The waters around the Red Water Pond do contain RDX to levels that need to be removed, and we will remove that water when we remove impacted soils. There has been a lot of concern about chemical agents. Chemical agents were tested in small quantities at the facility beginning in 1964 and ending in 1972, over 25 years ago. These chemicals, including

nerve agents, blister agents and CX were all tested in controlled areas, including the chemical test chamber which was an enclosed, air-tight chamber inside Building 003 where they did their tests. After the tests, what they would do is they would evacuate the air through filters, then they would pressure wash the chamber itself using sodium hydroxide. This water went into a mixing tank where molar sodium hydroxide was added. This was allowed to settle, then finally this mixture was put into the caustic ponds. And again, more sodium hydroxide was added to neutralize these chemicals. Again, the last discharge to the ponds was in 1972. In 1980, the ponds were excavated under the oversight of the regional Water Quality Control Board. McLaren Hart's role in this was to go back and confirm that impacted soils had been removed from the caustic ponds. The soils that were removed were not hazardous. They were removed because they had high pH levels. We did our surface soil sampling in those areas where agents were tested. No agent has ever been detected in any soil at the site. We have also sampled surface water and sub-surface water samples including the drainages that lead to this area and the ones that lead to Carbon Canyon, and again no chemical agent has ever been detected in any of those samples. Ordinate sweeps are another important part of this. These have been going on concurrently with the RFI. The methodology we use is that there are target carrier areas at the site. They are fixed formations where a gun was mounted and fired in one particular area, so we know where the impact area is. Our approach was to dig the impact area out, then start ordnance sweeps in a perimeter outside of that using trained UXO specialists (that's unexploded ordnance). These are qualified experts. The procedures are all done according to Department of Defense and Army Corps of Engineers techniques. We used the most advanced geophysical equipment and techniques available, and we had a quality assurance program which including re-sweeps of areas to ensure that we did in fact remove ordnance as according to our plan. The final step is we do UXO disposal. The technicians will look at the ordnance, make a determination if it can be safely transported offsite. If not, it is detonated on-site in a controlled area of the upper 16, according to procedures we have used in the past. Which brings us to the corrective measures. Of the 29 SWMUs and AOCs, 10 require corrective measures. There are three corrective measures to remediate these areas. We have three waste categories which include ordnance, CXs and chemicals in soil. As Robert mentioned, mostly this concerns an excavation and haul job. Ordnance will be excavated segregate to remove the ordnance. The materials will be replaced as the soil has been tested and contains no chemicals. We have CX canisters and filters where we will do basically the same thing: segregating them and packaging them. Those will be transported offsite. They are a California hazardous waste, so they will be in enclosed containers and transported according to DOT procedures. Finally, the residual chemicals in several of the areas will be removed. These chemicals will be disposed of as non-hazardous waste. The levels are not such that they will be classified as hazardous. This shows the SWMUs and AOCs, and it is to scale to give you a general idea of the 800-acre site we have here, and the extent of areas to be remediated. These big areas are all for ordnance. This is the biggest area of chemical impact, the Red Water Pond, and as you can see from the drainage area, anything from here is draining this way. Again, as we mentioned earlier, that has all been sampled. Finally, the most important part of the remediation is performance monitoring, which is basically to ensure that contaminants have been removed and that they have been removed safely. A big part of that is air monitoring. We will monitor during any excavation of impacted soil, several types of monitoring including personnel working the area, areas upstream, upwind. We will also put monitors between areas being excavated and residents to ensure that no impacted soil is leaving the areas. In addition, we will use abatement measures, dust control measures, using water to keep any dusts down. Another important part is transportation by truck. We will make sure everything is tarped, that there is no loose materials on these trucks as they leave the site, and that everything will be done according to DOT regulations. Screening operations are in a controlled area so that we can again minimize dust suppression and ensure safety. Finally, to ensure completeness of the activities,

there are three types of sampling we will do. The first will be confirmation sampling as we remove impacted soils. When we get to the bottom, we collect samples to prove that we have met our cleanup goals. As part of that, DTSC does collect split samples which are basically you put them in a plastic baggie, mix them well. They get a sample; we get a sample. They submit to their lab; we submit to our lab. We will also collect surface water samples, and a final measure in some of the areas where we do have some sub-surface water, we will install monitoring wells and continue monitoring. **(END OF TAPE SIDE)**

(INAUDIBLE) our water and engineering manager for the city is here as is our city engineer Lew Garber with PND Technologies. So Mike or Ron? It's yours.

[City of Chino Hills engineer speaking] Thank you, Doug. Just as a matter of brief orientation, the City of Chino Hills gets its domestic water supply from two primary sources. The first one is imported water, which is about two-thirds of our supply, and the other third is ground water produced out of the Chino Basin. That is currently produced out of approximately seven domestic wells. As was previously mentioned, all these production for domestic water are located east of Highway 71, the Chino Valley Freeway, and they are also east of the Chino Fault which is generally considered to be a substantial sub-surface barrier, separating the hills to the west from the lowlands and water-bearing material to the east. The City has, in the past, checked all of the production wells for perchlorate, and there were no detection levels at all in any of the wells. As far as the potential goes, we see that any influence would be negligible as far as the Aerojet site both in its geological and geographic relationship to our source water. Not only are our wells to the east of the Chino site, but they're actually up-gradient also. They're north and east of the Aerojet site, which is an important point to consider. Mike Maestas, the water and wastewater operations manager, recently hired by the district, has come from an agency that has dealt with some of the perchlorate challenges in the past. He knows a lot about it and keeps a close eye on it. We certainly feel confident. We are also encouraged by the commitment for the onsite monitoring, ensuring that there is no potential for migration of perchlorate which would be our primary concern. We would encourage their cleanup.

Thank you, Ron. We're at the council question-and-answer session. If this were a formal meeting, the council would then go through a series of questions. I believe Mayor Larson and Councilmember Norton-Perry have some questions, so I will attempt to be the moderator.

NORTON-PERRY: *If I might, I guess the first question is just kind of an observation. Gary, you've lived here longer than I have. The interesting thought is that it's interesting to me to find out that chemical types of weapons were being manufactured, tested at the site. The thought process was, when we toured Aerojet back in 1991, '92, that wasn't necessarily convened to those of us that were involved in incorporation or involved in the campaign. Just as an aside.... I'm not sure who to direct this to. Doug, perhaps you might be able to answer it; perhaps DTSC might be able to answer this one. To me, the overriding question is the just the basis on which this whole process is being evaluated, and that would be, one, why on not a full EIR versus a mitigated negative dec [declaration]?*

That question is probably best answered by either Jim or Robert Senga from DTSC.

[DTSC speaking] Okay, I guess the question is why not an EIR. As I mentioned before as I was talking about the requirement for the California Environmental Quality Act, it requires the

Department to conduct an initial study. Based on information from the initial study, which is basically the assessment, in order to determine whether or not there is going to be any impact from the project. The Department did do that, and the Department determined that the project, which is the remediation project, is not going to have significant impact on the environment, and therefore the Department has proposed a negative declaration. That is the reason. Again, the decision was based on the initial study that was performed by the Department.

NORTON-PERRY: *Gary, I have probably about ten minutes of questions, if that's okay. I know there's only two of us this evening. Okay, that particular initial study then. You're saying that was the determining factor on whether or not a full EIR or a mitigated negative dec was declared. Within the history of the State of California, are there been any other determined document that decides whether or not a project is clean or not, that have had significant ramifications for health hazards of Californians.*

[DTSC speaking] I'm not aware of one. As far as the Department is concerned, the Department looks at both the mitigated and negative dec [Negative Declaration] as basically one...

NORTON-PERRY: *Okay, let me ask it then, I'll try to be very brief about that. If an initial study is requested by you folks, that's the appropriate way to go with a mitigated negative dec. Have there been any mitigated negative decs within the State of California with which there have been lawsuits or questions that have been posed by residents for health hazards that have been assumed by residents or others in communities?*

[DTSC speaking] Okay, before I answer the question, the Department does do the initial study, we do not request somebody else to do the initial study. I am not aware of any situation whereby there have been lawsuits, but there probably is. I would have to find out. I guess that is something that I would have to take back...

2
NORTON-PERRY: *So the answer is you're not aware, for the record. Okay. Second question is for you. With regard to, I don't know if it would be DTSC or maybe someone from Aerojet can go into this one, perhaps both of you. I think it was one of the last ones that we had sort of swept through at the end here, talking about the ordnance sweepings that had occurred. Going through some of the documentation that I had received from your backup and through residents in the community, it refers to a hunt and peck method, which is quite concerning to me. Can you characterize that for me, and can you assure me that every single area that may have been contaminated is safe, and how can you assure the residents of Chino Hills, those potential new home buyers or those that may be affected by other contaminants in the area, are assured of their safety in the future?*

That's for Joe.

[Joe Bahde speaking] The hunt and peck method was used at one area, which was a landslide located in the southern portion of the property, basically over here. There was information out there that said the landslide was caused by a testing operation, a gun being fired over in this area and that it was fired so much that it caused this landslide. What we did was we went over there using this hunt and peck methodology...

NORTON-PERRY: *Can you define that? What is that? It sounds like a childhood game, so define that for me.*

[Joe Bahde speaking] Since we're in a very remote area, we couldn't get equipment up there without doing some serious brush abatement. We were doing an initial assessment of this area. What we did, typically what you do is grid everything off in 100 by 100 foot square, you put in 5-foot-wide lanes, and you go through it with metal detecting equipment. In this case, we didn't do that. We didn't grid everything off. We did sort of a random sweep. The only reason that we did this was for verification if this landslide theory was correct or not. Based on our information, we said that it was not correct, so we brought back former employees for a meeting to ask them specifically and take them up to this area and say, "Where was the impact area?" These people confirmed that our initial assessment was incorrect. This landslide was caused naturally. That why there were no ordnance there. The actual impact area was on the other side. We went over there. It's actually extreme terrain through this canyon here, but we had it brush-abated. We did a complete and thorough sweep of the area, gridding everything off, using both shodstat and geophysical equipment. That was the only hunt and peck method we ever used.

3 [NORTON-PERRY: *Okay, if I might then, a few more questions for you then. You had mentioned that you had brought in former employees, and in looking through documents, that was another question for you. How can you be assured that those employees that you spoke with gave you 100% of the information, that you were able to ascertain that all the employees that you spoke with were all those that have knowledge of it? How were you able to determine whether or not you have received a full assessment of what the contaminants might be or the concerns of future residents or current residents of Chino Hills?*

[Joe Bahde speaking] The interview processing was an evolving process. When we first came in in 1995, we interviewed who we thought were, at the time and still consider the most appropriate sources of information for this site...

NORTON-PERRY: *Can I ask you, how did you determine who those were?*

[Joe Bahde speaking] Those were actually from Aerojet records, that we determined who was in control of this production line, who oversaw the maintenance, who did the unexploded ordnance detonation.

NORTON-PERRY: *Aren't some of those confidential documents on some of the chemical manufacturing and testing?*

[Joe Bahde speaking] Yes, yes they are.

NORTON-PERRY: *So how can they be assured that you're giving us the full story?*

[Joe Bahde speaking] Well, with an ordnance sweep, we're not going out there looking for, say, a specific chemical. We are clearing the entire area, so Aerojet, if you look at the map, is very specific. You *know* where a target area is at. It's a boxed canyon. You know where there's no development at. There are nice groves of trees that have not been disturbed. So based on that information, we had a good feeling for where the areas were. Again, this is a military facility, and it is done to military specifications. They have to prove the quality of their ordnance, so they are not going to do it in a remote area. They need an area that has all the proper monitoring equipment to test the ordnance and do whatever they have to do. I'm not the expert of that, but that's just the history of it.

NORTON-PERRY: *Okay, if I might then. The history of it and Aerojet's history. Have you worked for Aerojet before?*

No.

NORTON-PERRY: *Okay, then maybe someone from Aerojet can answer that question then. Talking about the history and what you know about them, have there been any circumstances within the State of California or other Aerojet locations which may have had significant environmental effects or other potential impacts on residents or the environment?*

[Don Vanderkar of Aerojet speaking] There's probably a reference here to the Aerojet Sacramento site. Aerojet has two other large sites in the state. One is in Sacramento. The other is in Azusa. Both sites are involved in cleanup of ground water which has been contaminated by volatile organic compounds or solvents. In the Sacramento case, Aerojet has been working on this problem since about 1980 or '81 and has worked under three regulatory agencies, has analyzed all of the ground water in the area, has defined where the chemicals are, and is in the process of removing, pumping that ground water, and treating it. There was a concern in an earlier meeting about the American River. There are not chemicals in the American River. The American River has been monitored over and over again. There are chemicals in the groundwater that are being dealt with. In the case of Azusa, Aerojet is one of many, many, many organizations or industries that has operated in that area, and it has been found to have released chemicals to the ground. There are currently 19 entities that have been defined by the Federal EPA as responsible for those chemicals. There is a steering committee set up, there are negotiations ongoing, there is an extraction plan proposed working through local water purveyors to clean that up, and that is being dealt with in that situation. Those are the other two sites that Aerojet is involved with.

NORTON-PERRY: *Are those two sites, and again I'm not familiar with them, I'm just asking you, so you gave me more information that I had hoped for or anticipated. I guess the question would be, of that Sacramento site or the Azusa site, are either of those potential areas of redevelopment or development of residential and recreational structures as is this one?*

[Don Vanderkar of Aerojet speaking] The Aerojet site in Sacramento is a very large facility and the operations are limited on that site. There is a potential in the future for portions of that site to be developed for residential purposes or other purposes, yes. The Azusa site is much smaller. I believe it is on the order of 70 acres. It is fully developed currently as an industrial site and will probably stay that way.

4 **NORTON-PERRY:** *Gary, I've got about four more minutes of questions, if I might. Secondly, and I don't know if McLaren Hart wants to answer this one. I'm going back to one of the documents, and I have many here in front of me. There was some... or maybe even Ron wants to answer this one. Some potential ramifications that might be impacting Lake Los Serranos due to runoff, can someone answer that one?*

[Hassan Amini of McLaren/Hart speaking] This is Hassan Amini. We don't see any evidence of such impact, simply because there is only a small portion of the site surface water flowing that direction. We have done sampling to demonstrate lack of any chemical impact of that area.

NORTON-PERRY: *Okay, with regard to Lake Los Serranos, and you talked of Soquel Canyon, or one of the two of you did briefly. I noticed in the documentation also, it had mentioned some landslides that could also impact water runoff and a lot of other, some*

sideance rather, of some of the chemical further down under the soil. How might you address some of those issues?

[Hassan Amini of McLaren/Hart speaking] I need a little bit of clarification. I don't know if I understand your question.

5

NORTON-PERRY: *I guess two questions. Could landslides or quakes or other types of catastrophes impact runoff or impact contamination of ground water. Also, could those three types of natural disasters further impact the level of contamination that might be further brought down into the soil?*

[Hassan Amini of McLaren/Hart speaking] Landslides are known to dam canyons and stream valleys and therefore alter surface water directions and damming behind them. We don't have any evidence again, indicating that such a large landslide has occurred here and has change the surface water flow regime here. To answer your specifically in terms of landslides, I don't know any example. Do you recall any occasion when we had damming of the streams along any of these gullies or stream valleys? We don't see any evidence of that. In terms of earthquakes, it was mentioned here that the Chino Hill Faults run on one side of the Chino Hills on this side and Whittier on the other side, the Whittier Fault. Both of these faults are known to be active faults, and in fact we know that just a few days ago there was an earthquake of magnitude approximately 4, which is an aftershock to one of those earlier earthquakes. The faults that we have mapped and seen throughout the facility do not show any evidence that they are active faults. Thereby, I do not see any evidence that there's any path of migration along any of these faultings to sub-surface. Plus, as I mentioned earlier, the material is laid tight. These faults do not extend all the way to Greece or China. Basically, they stop at some point, and the path of migration further down from there on is usually non-existent.

NORTON-PERRY: *Okay, thank you.*

[Joe Bahde of McLaren/Hart speaking] I need to clarify one of my responses. As far as landsliding stopping water from flowing in Soquel Canyon Creek, no. But there was a time that Aerojet did maintain an earthen dam that we call Lake Arrowhead. It has been destroyed many years ago. From what I understand, they did that so there would be a water source in the event of brush fires. That did retain water for a while, and it was identified as an Area of Concern, and it was sampled for chemicals of concern and nothing was detected in it. That would be maybe a landslide dam example for the site.

NORTON-PERRY: *One of significant concern?*

[Joe Bahde of McLaren/Hart speaking] No.

6

NORTON-PERRY: *Okay. If I might, going back to questions of DU exposure. We've kind of glossed over that. If someone perhaps from McLaren Hart could tell me, what the level of exposure to that is. We haven't really delved into that too much. I'd like to find out what that might be.*

[Don Vanderkar of Aerojet speaking] I will attempt to speak to the concern. I am not a health physicist, and we did invite some health physicists from the radiological health branch, and I'm not sure if they're. Oh yes, they are here, thank you. So maybe you can correct me if I misspeak. Depleted uranium is a low-level radioactive material. It is not the uranium that is used

in nuclear reactions, in generating power. It is used for armor piercing, it is used for ballast, it is used for shields. The potential for exposure, we of course had people on the site. We did not manufacture the uranium on the site. What we did was test the penetrators. They were fired from cannons and were trapped in concrete boxes filled with sand where they pierced armored sheets of steel to see what effect they would have on the armor. The people who worked with those projectiles were monitored to see if there was any exposure. They were very carefully monitored and protected. The potential for a safety issue to anyone on the site or elsewhere is a matter for the oversight of the State in our remediation. What we do when we decommission and decontaminate a depleted uranium site is that first we know the areas where the depleted uranium was tested. We go in and we sweep with Geiger counters and we remove the contaminant when it is found. Typically it is found in chunks. The penetrator is either within the target area or within that immediate area of the targets. We also... a second way of finding the depleted uranium is to take soil samples and to take the samples into a lab and monitor them for radiation to see if there is any residual radioactivity in the soil. So we have these two methodologies, and we very systematically --Joe mentioned the gridding for the ordnance--we follow a similar process for the depleted uranium. We grid off the area so we have clearly defined areas. We set up pathways or lanes for the specialists, the health physicists to go out, and we remove any depleted uranium that is found. Then we sample the soil to make sure there is no residual in the soil. All this work is done following the development of a health risk assessment to establish a health level. We go well below that standard to make sure there is no residual in the soil. This is done by experts in the field. We have an independent consultant, in this case it's Rogers and Associates out of Utah. That's their specialty. They come, and they monitor to check that there's no residual. They prepare documentations, submit it to the State and the State reviews that. Then, to make sure, the State themselves comes out. They have their specialists, their health physicists come out with their instrumentation. They do their independent sweep of the area, and they take samples themselves to make sure that what has been done is done adequately and that the residual level, if there is any, is well below any established standard and that the site is left clean. Did I misspeak or is that a fair statement?

[Jeff Wong of the Department of Health Services, Radiologic Health Branch speaking]
Excuse me, I'm Jeff Wong. I'm with the State of California Health Services. (INAUDIBLE)
What Mr. Vanderkar indicated is accurate. (INAUDIBLE) to Aerojet for the possession and use of depleted uranium. During the time that they do have the license, the facility is periodically inspected by health physicists for accuracy of records, for occupational exposure, documentation of waste disposal, adequacy of surveys, personnel monitoring. Previously, in certain areas, Aerojet has submitted requests to release certain areas that has been designated for use and storage of materials. I believe in 1993, we did go back and did a review of their clearance surveys. In certain areas, we did go back and confirm that depleted uranium was removed to adequate levels. We used confirmation sampling, instrumentation, micro-ohm meters, pressurized ionization chambers to verify exposures were adequate. Again, soil samples were taken, submitted to our State laboratory for radio chemical analysis, the results that returned were at that time well below the release criteria that was established by our license.

NORTON-PERRY: *I have two more questions, Gary. My questions would take ten minutes, not the answers so... If I could just ask two quick other ones. I guess this might be for an Aerojet official perhaps. A kind of a follow-up to some of the statements you've just made. Are you aware of any individuals that may have contacted any sort of ailments or life-threatening diseases based upon the chemicals that have been tested and manufactured at the facility? And are you aware that might be violating lawsuits or have concerns regarding potential safety issues due to what has occurred over the years at the Aerojet facility.*

[Don Vanderkar of Aerojet speaking] No.

NORTON-PERRY: *That's a pretty finite answer.*

[Don Vanderkar of Aerojet speaking] That is the answer. I do want to clarify one thing. The word manufacturing has come up several times. Aerojet did not manufacture chemicals at the site

NORTON-PERRY: *Okay, testing. Let's rephrase the question.*

[Don Vanderkar of Aerojet speaking] We tested in small laboratory quantities, yes

NORTON-PERRY: *And based upon that redefinition then of my question, there are no individuals that have....*

[Don Vanderkar of Aerojet speaking] My answer is still an emphatic no.

NORTON-PERRY: *Okay, I just like to know that. My last question would be perhaps for DTSC. An individual from that agency. If someone could answer a question for me then. Have there been sites that you have determined to be clean and you have enacted all the necessary cleanup-types of ramifications that need to be done on those sites, that have come back and have had minor or major concerns, potential lawsuits, or other potential harms to the environment or residents based upon a clean bill of health, way-back-when?*

[Jim Marxen of DTSC speaking] I've worked for the Department., I think eleven years this week, and between Karen and I, we've probably worked on almost every site in this state, I think I'm trying to probe my brain to think of them. It may take some time to answer that question, but we don't have a lot coming to our mind right now. We can get back to you, but just off the top of my head, I can't think of any.

NORTON-PERRY: *So your lawsuit history is nil?*

[Jim Marxen of DTSC speaking] No, we've definitely been sued in the past, and we will definitely be sued in the future, but your question is more pertaining to have we reopened a cleanup because something else that we didn't do – there have been cases where during an investigation we have found things that we didn't *think* we would find and we've had to revisit some of the cleanup methods....

NORTON-PERRY: *Can I stop you there? When you say there are things you didn't think you would find, when I continue to read in the report, what I continue to hear in the comments that are made by those that are involved in this particular cleanup, are those that they have interviewed, those that they're aware of. There's always an assumption that there's a finite group of areas that are impacted when in fact what you just told me was something quite different from that. How can we assure that that doesn't happen to you folks and to us as well?*

[Jim Marxen of DTSC speaking] yeah, I understand where you're coming from. You assemble a team of experts, and you look at areas, like Joe was saying, where you suspect there is going to be contamination. You do interviews of people who had business on the site. You talk to

community members. You talk to people who have been on the site, and you use your experts to gauge where you best think that contamination is going to be. Karen can probably stand up here and give you a little bit more information on that. When you get into a hole and you start removing materials, you may find things that you didn't think you were going to find, or the extent might be different, but that's expected. A certain amount of change is expected once you get into the whole and start digging.

NORTON-PERRY: *Do we need today, then, and throughout the June 30 deadline to redefine your methodology to determine that's the appropriate methodology to identify the problems within the site?*

[Jim Marxen of DTSC speaking] No, I don't think you need to go back and redo the methodology. You simply can't Swiss-cheese a site. In essence, you're removing it through sampling if you do something like that. The best way to do it is to get the extent, the lateral and vertical extent of the waste, and have a fairly good idea when you're going in as to where that waste is going to be and remove it that way, and have contingency plans in place in case there are changes.

NORTON-PERRY: *One quick final question, then, for the State. Based upon the June 30 deadline for residents and concerned individuals that are listening to this or that may have questions about it then, if questions aren't on the record before then, what occurs?*

[Jim Marxen of DTSC speaking] If questions aren't on the record *before* the 30th? I'm not sure. The comment period has been about two months when the 30th rolls around. We'll have received a vast number of comments...

NORTON-PERRY: *Comments, questions, what-have-you....*

[Jim Marxen of DTSC speaking] We will have all the comments during that period. Are you talking about if we receive comments after that period? If something comes up that substantially changes our thinking about this site, we would certainly go back and look at it.

NORTON-PERRY: *Has anything done so, to date?*

[representative from DTSC speaking] I'm going to defer to Robert on that

[Robert Senga of DTSC speaking] Nothing so far, no

NORTON-PERRY: *Okay, we'll keep trying. Thank you.*

Mayor?

8 **GARY LARSON:** *Okay, I have a few quick questions, and then I have a list of questions Mike Wickman has provided for me last night that he would like answered as well. First of all, the cleanup crew as you're going in, are you privy to any of the classified documentation that the government has on the testing or any of the chemicals in that that were used on this site? Are any of your staff cleared to a secret or top-secret clearance that can have that information?*

That would be Aerojet probably.

[Don Vanderkar of Aerojet speaking] There is information that is of such nature that we have not been able to define the specific chemical compounds of some of the agents used at the site. That does not mean that we have not adequately investigated for those. In fact, we have. We have made every attempt, though, to get that information and it is simply not available. But we have found enough information from our records to define the types of chemicals, and they can be grouped into families. We then go and test for those types of families. With the work of McLaren Hart we were able to limit that number immensely because we were able to get some of the chemical constituents and the agents and were able to do specific sampling. Nonetheless, we conducted those types of tests where if the chemical were present, it would show on the chromatogram that the laboratory used. Just to be doubly safe to be sure that there was nothing in the soil that would be of concern, we conducted what are called toxicity tests. There you expose an organism to water in which that soil has been placed, so that if there is anything residual in that soil, the organism would be affected. We ran those tests just to be sure, and we did not have any loss of any of the organisms in those toxicity tests.

9 **GARY LARSON:** *Okay. There was mention made on the 25th meeting of interviewing former employees and so forth, a comment was made, and this is coming from a question from Mike's deal, that there were only five former employees interviewed. And yet tonight I get the impression that there were more. Is there a different number than five.*

[Don Vanderkar of Aerojet speaking] Yes, I was the one that misspoke at that meeting. I said off the top of my head, approximately five. In the meantime, we went back to reconfirm how many people we truly spoke to. What we did is we looked at this in two types of formats, a formal interview as Hassan mentioned where we actually recorded notes and so forth. We had three sessions and in total talked to eight former employees. So those were the number of formal interviews. However, throughout this entire process, we had informal interviews with other people as they became available. In this process.

NORTON-PERRY: *Can you cite the number of informal interviews you had also?*

[Don Vanderkar of Aerojet speaking] Too many to count.

NORTON-PERRY: *Wouldn't you want to count that?*

[Don Vanderkar of Aerojet speaking] No, no there's no point....

NORTON-PERRY: *Why would you not want to have a finite number on that if someone were to ask you a specific question?*

[Don Vanderkar of Aerojet speaking] Well, again, it's the formal versus the informal. In the informal...

NORTON-PERRY: *So you're not using documentation for anything.*

[Don Vanderkar of Aerojet speaking] Oh yes, it's documented. It's documented.

NORTON-PERRY: *So if it's informal, wouldn't you want to document how many of those informal interviews you had?*

[Don Vanderkar of Aerojet speaking] There's never . . . The question is or the problem is you never really have a true answer – well, I shouldn't say a true answer—but you're looking down a specific avenue, you're trying to get to a certain point. Through the informal processes, we couldn't go to the specific people so we had to go talk to client A which could lead us to Client B and he gives a little more detail which leads to client C. It's more of an informal process; we couldn't get right to what we were looking at in that process. And again, I would be working on this, current Aerojet employees would be working on this through another avenue, and then we would get together and come to our conclusion. And then we'd bring in our formal interviews and say this is what we came up with, do you agree and what are we missing. So that was a process that we went through. So there were really too many informal interviews to count.

10 [NORTON-PERRY: *Is that a standardized process of collecting information on chemical type investigative environmental studies? An informal sort of whatever, kind of a wag interview process?*

[Don Vanderkar of Aerojet speaking] I would guess the answer to that is both yes and no. We have a site that has been operating since 1954, and there are classified chemicals out there. There were classified programs done out there, too. There is no one source that you would typically, in another RCRA investigation or another facility where everything... you could go to the records and look it up. We didn't have that luxury in this case. We had most of it, but not all of it. So that's we sort of modified our approach to this specific case.

11 [GARY LARSON: *There's been several comments in the newspapers, and I've heard this. Is it better in some instances to leave it alone and not disturb it versus disturbing it, where hauling out dirt is, in some aspects, if you don't touch it, there's less contamination than if you do touch it. What is the case in this scenario?*

[Don Vanderkar of Aerojet speaking] Our recommendation was that regardless of future site use, it needs to be cleaned to the residential use, which is the most conservative site use. That was our recommendation to DTSC, but let's do remember that when called for a remedy, it's really the State that has the jurisdiction and responsibility as what is the appropriate cleanup method. We only did a recommendation, and they are the ones that directed and still are directing, and I assume that they are concurring with our recommendation on that.

[representative from DTSC speaking] Let me add something on that. As far as the option of leaving contamination in the area, obviously the Department responsibility is protection of human health and the environment. Definitely, to leave any contaminants at the site would definitely be a failure on our part.

12 [GARY LARSON: *Thank you. There are many times where night trucks... or trucks are coming in and out of there at night. And questions are asked and answers do not seem to be forthcoming. What's being hauled, why are they doing it at night, why they closed down a residential street without informing residents ahead of time. those questions have come up. Why the secrecy?*

[Don Vanderkar of Aerojet speaking] There's absolutely no secrecy involved here. We have done some hauling of material from the site. Joe Bahde, I believe was there through almost all of it and can speak personally. There was no hauling done purposefully at night or otherwise at night, except perhaps if we had a long work day and truck continued into the evening after it got dark. The process that we have gone through, we worked with the city, we had a designated

traffic route for trucks. We followed standard procedures in all of the operations to my knowledge were done in accordance with the standards set by the city.

NORTON-PERRY: *Can you comment on what was being hauled in those trucks?*

[Joe Bahde of McLaren/Hart speaking] Just a follow-up on what Don said. The only vehicle traffic at night that may have been seen is equipment would be dropped off, delivered to the site, and maintained at night, but only in extreme circumstances. To be honest with you, I can't think of one where anything was moved at night

NORTON-PERRY: *Okay, and content?*

[Joe Bahde of McLaren/Hart speaking] As part of McLaren Hart's removal process, perchlorate was moved from one of the areas, upper 12, about 18 trucks worth. Another part, we'd had a former UST on the site...

NORTON-PERRY: *Can you explain that to the layperson?*

[Joe Bahde of McLaren/Hart speaking] Underground storage tank, gasoline tank.

(INAUDIBLE)

NORTON-PERRY: *Eighteen trucks worth?*

[Joe Bahde of McLaren/Hart speaking] Eighteen or nineteen. There's a tonnage, and I'm not quite sure off the top of my head. It's 350 tons or something like that

NORTON-PERRY: *Thank you.*

(INAUDIBLE)

[Joe Bahde of McLaren/Hart speaking] No, they were all removed during the day time.

GARY LARSON: *Well, you know, it's almost a direct dichotomy with some of the residents that I've spoken to, and that's what scares me. Because there are some residents that live – I can't remember the name of the street – it's just off Soquel Canyon. If you turn right then you turn left to go up to your site, they go on straight and turn right.*

(INAUDIBLE)

GARY LARSON: *Well, it's Medlar Lane. And many of those residents said they were not allowed to get to their home at night. They weren't informed on two occasions. The trucks were coming through there constantly, all night long, and now I hear otherwise. I have to accept what the residents who are trying to sleep and they can't sleep because of the noise of the trucks, that there's something going on.*

[representative from Aerojet or McLaren/Hart speaking] I'm not aware of that hauling at night. I would like to add a couple of other occurrences to what Joe mentioned. The depleted uranium that we have talked about, when it was removed, there were also many trucks that left the site hauling depleted uranium. Depleted uranium is placed in sealed containers when it is

removed. There was also some soil removed from the open burn-open detonation site that I mentioned in my discussion, and that was soil that had low levels of explosive chemicals in it, that was not hazardous waste, and it was removed from the site. I really cannot explain the discrepancy here in what people are saying. The one thing that I can say, in the future as this job proceeds to be remediated under the oversight of the State, we have heard the concern and we will make certain that the hauling is done in reasonable hours and that it follows the standards that are set.

GARY LARSON: *Okay, thank you. Ron, I want to not put words in your mouth, but basically the wells that we have as a city, how many of those are deep water wells than shallow water wells. Is that the reason we get a better quality of water? I know the answer already, but everybody else is not... Most of our wells in that area that Chino actually did find some contaminants in their wells, but all of their wells are shallow water wells. Am I not...?*

[representative from the City of Chino Hills speaking] That's correct. Out of the 7 or 8 production wells for domestic water that Chino Hills has right now in operation, five of those are deep aquifer wells – pump out of the deep zone. The remainder are shallow wells. We do some blending because of nitrate levels in those shallow wells with the deeper wells for quality purposes. The perchlorate that was found in Chino, all of Chino's production is out of shallow wells at this point in time.

GARY LARSON: *Okay, thank you. I'll quickly go through and see if I can get through Mike's questions, all the rest of them. He's concerned about the extraneous circumstances or the extra area surrounding the 800 acres.*

NORTON-PERRY: *You mean like a buffer area?*

14 [**GARY LARSON:** *A buffer area surrounding that. Is there any tests or anything that's doing... I know the State mentioned that they have jurisdiction that they can force a cleanup. Is there anything that has been found that would lead to a discretion that should be done in a buffer area around the 800 acres? I guess the State....*

[representative from Aerojet or McLaren/Hart speaking] I have [heard], during the public hearing on May 13th, residents did say that projectiles had been found outside the area. Other than that, I'm not aware of anything else that has been found outside the Aerojet area. But I have read and I was told, people said during the public hearing, that they had seen or become aware of projectiles or different things outside the Aerojet area. We haven't in our investigation, we haven't come up with anything.

NORTON-PERRY: *Does that mean you're not doing anything within the buffer area? That's the question.*

[representative from Aerojet or McLaren/Hart speaking] No.

The one thing about the buffer area that I want to clarify, the 800 acres includes the buffer area Aerojet only owns this portion through here, which you see in the black line, which is 400 acres. Included in the 800 acres is this buffer zone. When we did our investigation, we looked at the buffer zone just as we did for the site, and in fact, this area here is in one of the buffer zone properties. It is a SWMU. I think that might have been clarification. The buffer zone was investigated with the site.

GARY LARSON: *It says dioxins have been located in some areas and (END OF TAPE 1)*

15 **GARY LARSON:** *Aerojet stated that the only potential impact to the community is hauling the stuff off-site, but you're going to process it through decontamination stations, removing the extra soil through moisture and so forth. What does "properly tarped" mean, and "enclosed"? You say it's properly tarped, but is that determination.*

[Joe Bahde of McLaren/Hart speaking] We're really summarizing the DOI, the Department of Transportation procedures, which we will implement when we do this corrective action. As far as the decommissioning part, when we do go to an area where we are dealing with impacted soils, we build a temporary decontamination area. As the trucks get loaded, before they leave the area of impact, we actually inspect them, we make sure there is no loose material on the trucks before they leave the area. We make sure there's no loose materials on their tires and so forth. As a final step, what we're going to do is before they even leave the site, we'll do another inspection up towards the top in the administration area – we have a large parking lot. It's the same process that they use when they remove depleted uranium from the site. They do a supplementary inspection, where they look at the tarps, make sure everything is secure, and again that there is no residual materials on the trucks before they are allowed to leave the site.
(INAUDIBLE)

16 **GARY LARSON:** *You've also stated that screening is not an easy process, it's a messy process. During many of the areas of the year, we have Santa Ana winds. Do those Santa Ana winds affect that area that you are going to be using for the ordinance work and the cleanup site, and if so, will you halt or cease operation during that period of time that we do have the strong winds?*

[Joe Bahde of McLaren/Hart speaking] We are going to do our ordinance screening operation in a place called One-Charlie. I'll go through the process of how we're going to be screening and where we'll be screening, then Robert can address the latter part of your question. We've chosen One-Charlie because we can control the access to the area. It is a large box canyon that runs down the center of the facility. Yes, right there. We already have soil staged up in this area, so we can control the area, we can monitor and restrict access, we can put our air monitoring stations all in this top ridge line. In addition, we can grade this ridge line to make sure it is free of all kinds of brush and any other potential debris. So, Charlie makes the ideal area to do this. Another reason is it is a box canyon, so we do have a little bit more control of where the dust is going to go, and so forth. I'll let Robert...

17 **[Robert Senga of DISC speaking]** During the public hearing, the question about the monitoring came up, and during that hearing I said yes, we are going to have air monitoring in addition to the dust suppression that we're going to be using during the excavation. Not only are we requiring Aerojet to have the air monitoring at the excavation area, but we are also requiring them to have monitoring at the border next to the residents. We are going to have...

GARY LARSON: *And those tests are going to be public knowledge as they go through?*

[Robert Senga of DISC speaking] Yes, they should be.

18 **GARY LARSON:** *Alright. Will the residents be informed when stuff is going to be hauled, those residents that will be on the official truck route? So when you get ready to do your huge*

18 | *caravan of trucks and so forth, are the residents going to be notified?*

[Robert Senga of DTSC speaking] Well, once the decision is made, once the approval of the remediation is done by the Department, Aerojet basically has a schedule to do the work. Depending on when the excavation is done and when they are going to have the trucks, one of the things they also have to comply with is the DOT regulations. I would imagine that one there may require them to mark out with the CHP and notification, but I'll let them clarify that.

Before it comes up, we will have a fact sheet that goes out that lets people know the schedule of work, when trucks will start. We will be doing a notification to the public. Again, members are on the mailing lists, and if Vicki wants to, I don't know if everyone on that transportation route is on the mailing lists, but we can do that.

An appropriate venue might be the local papers in the city, so we can get the word out also.

We would certainly let the papers know

GARY LARSON: *Okay, good. Alright, I think that's all. I realize that was a long time, but those are a conglomerate of many questions that have been asked by residents, and so we wanted to ask those that we could. Alright, now....*

What we'd like to do now is afford each of you an opportunity that has questions to ask them. For those of you that haven't filled out a slip, if you could do so and provide it to Linda, our City Clerk. What Linda will do, we'll call out your name, and if you'll approach the mike and state your name and address. If you've got questions for a specific individual, again I think the way we'll try to operate this is like we do at a regular meeting. If you could limit your comments and/or questions to three minutes. Again, we won't hold the response to your three minutes. So with that, Linda?

NORTON-PERRY: *Doug, if I may, I also have to leave in five minutes. I'm not trying to be rude when I walk out, so I just want people to know that.*

The first is Edie Cartwright.

19 | *Good evening. I'm Edie Cartwright, and I am from Aerojet. Thank you again for giving us this opportunity. I'd just like to read a brief statement here that I think we'd like to get on the record. In the interest of full disclosure, Aerojet is aware of an individual who has appeared at both the DTSC public hearing on the 13th of May and also the Aerojet informational meeting on the 25th. The individual is here; as a matter of fact she is taping portions of this meeting. The individual is Marjorie Mikels. She's an attorney; she's from Upland, CA. Ms. Mikels has spoken out vehemently at two previous meetings involving the proposed Aerojet cleanup without disclosing that she is an attorney, and that she's not a resident of the Chino Hills community. In light of this nondisclosure, Aerojet questions Ms. Mikels' motives in this matter. Thank you.*

(APPLAUSE)

Marjorie Mikels

(LAUGHTER)

20
Good evening. City Council members of the City of Chino Hills, I thank you for your excellent questions, the obvious interest that you've shown and the study that you have put into this issue. No, I'm not from Chino Hills. I don't have the pleasure of living in this beautiful, beautiful place, but my family has lived in San Bernardino County for about 75 years. I guess I first heard about this site with relationship to Jay Kim. Jay Kim, as you all recall when he was first elected to Congress, gave about \$400,000 illegally to his campaign from his engineering corporation. Then when I learned that he got that money in part from his contract with Aerojet, whereby his engineering corporation, several years ago, determined that the best use for a site where for 40 years they have been testing weapons, including nuclear weapons (which depleted uranium projectiles are). All the people from times past talked about all these explosions in these hills, and things, and the contaminants here.... His firm decided that the best use for such a site was to put houses on it. I hadn't heard of anything so silly since I heard about how the State of California and our Department of Health Services had licensed a nuclear dump to put radioactive waste right over the largest ground water aquifer we have in our entire desert, in unlined trenches in the sand. I have to admit that there seems to be some relationship because Catelus, which owns the land at the Ward Valley Nuclear Dump Site, also owns land right next to this 400 acres and wants to build houses here. It's just really a small county, and there seems to be a lot of the same actors at work. I see in the paper how Frank Williams of the BIA and Dave Ariss, who I call the grumpy teddy bear with money in his pockets for all the politicians, they're all telling you guys and putting you under all this pressure: "You've got to develop; we won't give you any commercial", which heaven knows, you need because of the finances in this town "until we see more rooftops, and we want rooftops right where Aerojet is." So I'm just interested in this. I am more interested since I first came to that meeting, and my heart cried out as I heard person after person talking about the cancers and the thyroid related illnesses which are suffering in the community, and especially those people who live closest to the site. I have written a letter to DTSC, and I have brought you each one. This will eliminate all plausible deniability, and I have outlined what are the effects of depleted uranium and perchlorate. I just am real concerned that there are several terms that are thrown around that are not clear. The term "hazardous", they say these loads of soil being taken out of here are not hazardous and the people....

Marjorie, can we ask you to wrap it up please?

Oh, I sure will. That under the Code of Federal Regulations, "hazardous" is a capital letter word that refers to a different kind of waste than radioactive. Even though it's not hazardous, it can be radioactive which creates the cancers and the mutations in our communities. The other thing they keep saying that's, in my belief, very deceitful is they say "oh, it's just low-level." Low-level is a deceitful term that categorizes nuclear waste, but low-level waste as even Congress has said can be more dangerous to your health than many high level waste. It's categorized by where it's produced. If it's produced for weapons in a weapons plant and so forth, it's high level. But you can still have uranium-238, you can have plutonium-239, that's classified as low-level waste, and we haven't been told whether there's cesium and strontium. We haven't been told whether there is plutonium on this site. We haven't been told....

Marjorie, do you have any specific questions? If not, we'll go to the next speaker.

Yes, I would like to just ask a couple questions. Where is the perchlorate dirt going as it's being hauled through these communities with flapping tarps and so forth? Where is the depleted uranium going, and why isn't the Highway Patrol involved in it? Why is only the San

Bernardino Sheriffs and possibly the police department here involved? Under Vehicle Code Section 33000, when you have radioactive waste and hazardous, contaminated material, Highway Patrol needs to be supervising that, and I'd like to know....

20
Don?

...and I have these letters that I'd like to give to the council, if you wouldn't mind. I would like to talk longer, and I do understand your time restraints.

[Don Vanderkar of Aerojet speaking] There were a lot of questions asked. Let me see if I can respond to them very briefly. Regarding nuclear waste, depleted uranium is not related to nuclear waste. Depleted uranium is a low-level radiation compound. We have experts in the back who have previously said that I adequately described it. The analysis of the depleted uranium is such that we do not leave a residual in the soil at the site. The material is containerized, it is hauled to Envirocare in Utah. That's where it is disposed of. Regarding hazardous waste in general, RCRA (Resource Conservation and Recovery Act) which was enacted by the US Congress, has associated with it procedures and regulations that clearly define what a hazardous waste is. When I use the term, when we have used the term "hazardous waste" we mean, in accordance with a federal law, it is not considered hazardous. Depleted uranium falls under entirely different jurisdiction in the federal law. We have treated it very carefully, as I have described. It is properly handled in accordance with appropriate regulations, and it is containerized and removed from the site to a properly licensed facility. I want to go back just a brief moment on the issue of radiation. There are many elements that are on the face of this earth and are in the earth, that are radioactive. We live in a background level of radiation. That's just a fact of life. Obviously, we want to minimize that. That's what we're trying to do here by remediating this site, is to remove these materials and put them in a place where they can be dealt with properly. This is a standard procedure that is conducted around the country. Regarding Jay Kim, Jay Kim was retained by Aerojet, I believe in either 1990 or 1991, to do a study of the site. Jay Kim performed for a very short period of time. I will not go into details as to that relationship. Aerojet chose to discontinue that relationship. We then hired the firm of McLaren Hart after we interviewed, or got proposals from something like twelve consultants and interviewed three. The recommendations as to what to do with the property are not at issue here. What is at issue here is what is the proper way to clean up this site, and that's what we're about.

Mary Unrein

(INAUDIBLE)

At this time we're going to go through the question and answers to make sure we have everybody who has questions out on the table.

21
It is....., What is it now? It's five to eight, and we've been listening....I've been researching a little bit. In 1996, I sent a letter to Bruce Coleman along with information, and I sent the same letter to the different government officials. As you are aware, I am very concerned about the Aerojet site cleanup process in Chino Hills. I have spoken to Christine Brown of the California Department of Toxic Substance Control and have researched Aerojet's history. Enclosed are some of the following related documents I have collected. One, 6 Chino Champion newspaper articles. Two, Aerojet press release. Three, US EPA preliminary assessment of Aerojet facility, 1992. Four, Superfund description and clear list sites. Five, EPA American River study and action plan. The six articles found in the Chino Champion

21 refer to the Aerojet shutdown. In some of these articles, a former employee discussed areas of concern. Aerojet officials said they were not aware of these areas. (INAUDIBLE) This former employee was not recruited by Aerojet but heard about the planning development by accident from a relative. The press release of July 12, 1995 is surprisingly argumentative. We citizens have every right to know the land usage and cleanup operations. Aerojet cleanup should be relevant to future development. The enclosed is the US Environmental Protection Agency preliminary assessment of Aerojet ordnance Chino Hills facility, 1992. Contradictions: Aerojet's land use is seen on page 5, paragraph 1. Two caustic ponds were described. Aerojet continues to state publicly that their manufacturing process is a dry one. Mr. Vanderkar keeps saying that there is no manufacturing, but in the press release that they gave out that I made a copy of, they've used that word three times. They're saying things differently now. A description of the Superfund Site Aerojet Ordnance Chino Hills facility is on this list. Thanks. I have all this documentation, and I'm going to submit it. Bruce has a copy because, God love him, he made a copy for me because I lost mine. But (INAUDIBLE) I just got it by asking the EPA, and they sent me it. It has been developed because of the contamination of ground water by Aerojet in Rancho Cordova, northwest of Sacramento. The American River has not been cleaned up.... This was in '96. Maybe it's been cleaned up now. This is just their work on it, the EPA, and it gives you the exact areas of contamination, and the whole process. Anyway, so this is what I've been documenting for a while, and it shocks me again, you know. The words are different, but they can't guarantee that everything's cleaned up there. That's the bottom line.

(APPLAUSE)

(INAUDIBLE)

Carol Dobrikin

Mary, was there a specific question that you wanted them to respond to?

22 I asked at the general meeting, and they give 100% secure, confident declaration that everything is cleaned up there, and they said nothing is 100%. My question again is, how can you live in something you're not sure of? (INAUDIBLE)

Is there an answer, Don?

[Don Vanderkar of Aerojet speaking] I will be brief. We are not here proposing development of the property. We are here to define how we can best clean it up. If we can improve our recommendations of our consultant and the review of the State, that's what we will do. We want to clean this site up. That is what we're about. We have used the best technology, the best consultants, the best processes. We have gone above and beyond the requirements to try to get this site characterized, so that we know where the chemicals and ordnance are. It is our goal to clean it up in accordance with all established standards that are present and do our very best at it. That's what I'm hired to do, and that's what we're about.

Thank you. Carol Dobrikin Is Carol here? Okay, we'll go to the next speaker.

Deborah Peterson?

23
I'd like to thank the council for asking the fabulous questions this evening. Thank you very much. My question is on the performance monitoring. How do we know that it's really being done? The only way that I can think... You know, I'd love to trust everybody in this world, but I just can't trust everybody in this world anymore. So with all due respect, how do we know, Joe, that it's really going to be done? Who can we call upon as an independent that represents us? Unfortunately, in this type of scenario, it is us against them. Sorry. But why can we not have somebody from our group that can go with you, if there's not that big of a problem, if there's not that much problem up there, how come somebody representing us can't go with you during that performance monitoring? I think we need an independent up there to make sure it's being done right. That's my first question. How come we can't send somebody with you, and how do we know it's really being done?

Probably DTSC. Robert?

[Robert Senga of DTSC speaking] How can you be sure that it is being done? The Department of Toxic Substance Control's responsibility, and I said this during the public hearing, the responsibility is the community. Therefore, the Department is independent and its responsibility is to make sure that the work that it approves, that that work is going to be done in accordance to what we have approved. We are going to oversee the work, we are going to be there, we are going to take confirmation samples to make sure that the cleanup goals are met. We are going to do that. The analyses are going to be done by the Department laboratories, so that is, in terms of oversight, the Department is going to be doing that

With all due respect, I don't always want a public agency to take care of me. I want somebody who is the public to be there, not just somebody who my tax dollars support.

(APPLAUSE)

I guess the question might be, does the process, Robert, allow for observers, allow for our residents or someone else to observe the process?

[Robert Senga of DTSC speaking] Jerry, again, I will go back to the public hearing on the 10th. There was a question about whether or not there could be a technical assistant opportunity or funding in order to have an independent person to advise the community. We have checked on that, and the requirements for that, since this is not a Superfund site, the grant for a technical assistant is available to Superfund sites . . .

But I'm not talking about a grant, I'm talking about somebody who would volunteer.

[Robert Senga of DTSC speaking] You're talking about a volunteer...

I mean, is there somebody here that may volunteer to go out with them? I'll take one day a week or something....

I think she's saying, why don't we form an ad hoc committee?

I'm not educated enough in this process, so pardon me, okay?

Maybe I can help. I think the question is, not having anyone from the State or having somebody that is funded by the State or anyone else, but a volunteer, a resident in the area.

Dick.

(LAUGHTER)

You know, somebody that could basically observe the process.

That's why I was going to volunteer. Right. I mean, I can ask questions. I've seen everybody talk and talk and talk up here, but I don't know where it goes from here, how I follow up with that. I'm going to, though. I'm starting to really get into this. My other thing is...

(LAUGHTER)

This risk assessment to extend beyond the boundaries. They said they did an additional 400 acres, but I thought I saw that one of the SWMUs was well outside of the area. How do we know it's not even further out than that? Where does it stop? How much further does it go? My question would be, can we require them to go even further out?

Go ahead.

[Robert Senga of DTSC speaking] Again, the areas that are investigated, basically this information, in terms of which area we are going to investigate, we go through... These are the areas that were identified through the preliminary assessment and also other areas that were brought to the attention of the Department during the work, during the investigation. Obviously there is a site, there is an area... at the moment we are not aware of any area outside the areas that we have talked about. Obviously, if another area comes up during the work, then definitely we would be doing that.

24 *But isn't there a certain policy or procedure? Let's say for example, if the SWMU was this far out, by law shouldn't they be required to go another certain amount of feet or another 3 acres beyond that? Isn't there like, if you find one here, you must go further, you must go further, you must go further until there's a certain slot where there is no contamination.*

[Robert Senga of DTSC speaking] The problems of the investigation which is, as we said earlier, we do both lateral investigation in order to determine the extent of the contamination. Obviously, if during that investigation, if we found that there was, then obviously we would have to chase it, we would have to follow that.

Right, and you did find that there was, outside of that certain space. I guess my question is, is there a certain amount of space, is there a law or something that says if you found one 20 feet out, you must go another 40 feet beyond that, or you must go another 10 feet beyond that. That's my question.

[Robert Senga of DTSC speaking] No, I'm not aware of a law.

Can you help me, Mr. La Belle? Am I asking that right? Do you know what I'm saying?

[Robert Senga of DTSC speaking] Yes, I understand the question. The question is, is there a framework beyond what has been identified here as the study area, and...

And can it go beyond if you find beyond?

[Robert Senga of DTSC speaking] And again, during my presentation, one of the things that I said is that our authority allows us to go outside. In this case, if there was a reason to extend outside, we would.

Okay, if your authority allows it, then I as a citizen am asking you, can you please go even further, and that's my last comment, then. I'd also like to say thank you for Ms. Mikels. She hasn't taken anything from us, and if there's not going to be a problem with this site, no one should be worried that there is an attorney here.

(APPLAUSE)

Judy Morton?

25
Hi. I'm Judy Morton. I live in Chino Hills off Autumn Avenue. I would like to say, I would like to know...well, I understand as far as the EIR goes, I think that there is a definite environmental impact on our environment and on the animals and on the people. I have been specifically affected. I saw a truck traveling down with dirt that was contaminated enough to take off the site with the tarps flapping. Therefore, I was definitely affected. That's a potential risk, okay? That happened to me, which I saw, okay? So there were not safeguards set up to stop that. Now the safeguards are going to be enacted because, whoa, I said something. So now we have to do something about it. That was unacceptable for me. That was an unacceptable procedure. Also, the EIR needed to be done and still needs to be done because we have water traveling through there. In this city, we have EIRs done just for areas that include a church going in. We have an EIR done, okay? We have to have an EIR done on the cleanup, meaning how is the cleanup going to affect our community? How is it going to affect the water supply? Perchlorate has been traveled around the site and caused to increase in certain levels that were not at a certain rate in the beginning. Now, they've gone up higher in other test samples, okay? It was even stated by McLaren Hart that that was possibly caused because of the trucks and the mud and the tires and transmitting the perchlorate to travel around the site. Therefore, another area has been environmentally impacted. We need to really look into this and do what we would do for our own community. This is our community, and we need to see how the cleanup is affecting us as a community. Also, I would like to say that I also would like to submit a formal request that a public participation plan be created. It's my thought that a public participation plan has not been created, it was just kind of thrown together. Okay, we were thrown out these fliers. Aerojet was scrambling, "let me get a meeting together." Okay, we need to have a public participation plan enacted where certain things happen all along the way, not just all of a sudden, okay this is cut off, the public no longer gets to make an opinion all along the way. We need to have it from the beginning to the end. This needs to stay open, we need to stay friendly, and I'm going to be submitting a definite formal request to Ed Lowry, who is into all that kind of stuff. We need to have public participation, where the city doesn't go up in an uproar because the DTSC just starts talking for the first time after a three year period of a cleanup has been going on. We need to have this open from the beginning to the end. And also, I would like to say to Ron? You're still here? Okay, when our water was tested, did you use the new testing procedures for perchlorate that are out to determine the levels of the water lower, that gets the 18 parts per million, that they're now using now? When was the water tested for perchlorate?

[representative from the City of Chino Hills speaking] Actually, that was tested... Friday was the last time. The last time we tested was Friday, and the practical quantifiable limit was down to four, so it did get down lower than eighteen.

Okay, so there was a parts per million of four, and you have that documentation available for me to look at?

[representative from the City of Chino Hills speaking] No, it was not... a limit of four. I'm saying that's a practical quantifiable limit that they can get to. Anything above four, if it was there they would have been able to detect it.

Okay, and so that's the new... Four is the new standard quantity...

[representative from the City of Chino Hills speaking] That is the one that was used. That's what was used by the lab. There are five labs that are certified to test for perchlorate, and we used...

And is that the latest that the DTSC has recommended now, and is that the standard that they've determined as the quantifiable limit for testing now? Because they put out a requisition in 1999 in January that all water supplies have to be tested to the quantifiable level that is available today. The most accurate. Is that the most accurate level that is available?

[representative from the City of Chino Hills speaking] I am not 100 % sure that that's ...

... the most accurate available test

Exactly.

Okay, I'd like to request that the most accurate available test be done on our water.

[representative from the City of Chino Hills speaking] I'll follow up on the procedure that was used, but again, what was used was the best technology that the lab has that is certified by the State to do perchlorate.

Okay.

Robert, did you have something further?

[Vicki Tamoush of DTSC speaking] My name is Vicki Tamoush, the Public Participation Specialist for this project. I think some of you may know me or may have been interviewed by me during the community assessment that was done here. The public participation plan that you asked for, Judy, it's in the library. It does describe all the phases throughout this project at which the public has opportunities to participate and what those opportunities are. You saw some of those in Jim Markson's presentation, the fact sheet, public meetings, public hearings, that kind of thing. That's all described. It's in volume 8 of the repository next store.

Also, did Aerojet during their operation monitor their employees for uranium exposure? What tests were performed while employees worked on the site?

[Don Vanderkar of Aerojet speaking] I mentioned earlier that our employees were monitored and tested. The typical test is to have a badge that collects the radiologic emissions and will record if there is an exceedance. It is a standard test that is used in this industry. Again, I'm not the expert, and maybe the State can expound on that, but we followed the standard procedures and monitored our employees.

Is that information available for people to look at?

[Don Vanderkar of Aerojet speaking] The information, I believe, has to be filed for a certain period of time. I do not know if it is currently in our files, but I will check and see if it is.

26 **[** *Okay, also, there's one area that Joe was talking about. Point out upper 16? (INAUDIBLE) Also, I'd like to know if a risk assessment work plan was created. There's a risk assessment, and there's also a risk assessment work plan. Was a risk assessment work plan made?*

Robert, is that...

Okay, there's a risk assessment, and then there's a risk assessment work plan. That means it assesses the risk of the work plan. Was that created? They're two different documents?

[Robert Senga of DTSC speaking] Okay, in the preparation of the health risk assessment prepared, one for the closure and the other on the remediation. The procedure that we have followed in the process, basically being the submittal of the document, basically the Department provides guiders to the facility in terms of what they need to be cleared in the risk assessment or the chemicals of concern that need to be addresses, the exposure pathway... All those things here need to be included in the risk assessment. Normally there isn't a work plan that is submitted. I know that recently we have taken that position that we are going to be requiring work plans to be submitted first before a health risk assessment is done. I'm not aware that in this one, that was done before.

Okay, so there was no work plan risk assessment done on this property.

[Robert Senga of DTSC speaking] There was a risk assessment done under the guidance of the Department. Basically the Department provided the...

Not the risk assessment work plan, though. The one that you're now deciding to do in the future on other properties.

[Robert Senga of DTSC speaking] Basically... maybe I don't understand your question, but... The risk assessment work plan is the steps or the things that are going to be included in the health risk assessment. Basically, in the past, what we have done is provide the guidance to the company that is going to be doing the health risk assessment, basically telling them "these are the things that must be included in the health risk assessment for us to review."

One of the documents that is actually in the repository is the RCRA facility investigation work plan (RFI work plan). The RFI work plan and addendums to the RFI work plan addresses the risk assessment. We didn't wake up one morning and say that, by the way, we're going to be using 10^{-5} for perchlorate or 10^{-4} for RDX or anything like that. All of those were communicated in DTSC in these documents, and we have followed their guidelines, including the preliminary

endangerment assessment, PEA guidelines from DTSC and RCRA guidelines to perform the risk assessment for various compounds, individually and cumulatively, by the way.

Okay. I have one more question. Thank you very much for your answers.

If we could wrap it up, Judy. One more quick question.

27 *Okay, I have one question. What about the radioactivity in the water tested up there? I have some documentation from the regional water department from the past that have done water testing up there. The water was tested, the ground water, places on the surface water were tested, and it did show radioactivity. I would like to know, since radioactivity lasts for 4.3 billion years in depleted uranium, has that water been tested for radioactivity, and did it all of a sudden go away? Thank you.*

(APPLAUSE)

That's a question I can't answer . . .

[Don Vanderkar of Aerojet speaking] I'm not aware of any sampling of water for radioactivity levels. I personally don't believe there are any in the water because of what we have seen in the soil. What we have done, and I explained the process and the State agreed that that was the process that was followed. It is a very detailed process and we remove the radioactive material from the soil. Now, for the material to run off and be in the water, I can't speak to whether that is a risk or not. I personally don't have the expertise. My belief based on what I've seen on the site, it isn't. If that is a concern, we will certainly consider addressing it.

Okay, thank you Don.

Kimberly Sloss?

28 *Hi, my name is Kimberly Sloss. I live at 3242 Hilltop Drive, and I'm a new resident to Chino Hills. Forgive me if I need a couple of questions to catch up. There's one comment that I did have to make before the questions, and one of your comments, sir, is that depleted uranium is not related to nuclear energy. It is the waste product of nuclear energy, and that's information I can get off of one internet site off of Yahoo, so you should know that. What are the effects of depleted uranium, and how long does depleted uranium remain radioactive? Why hasn't the water been tested? How many tons... I read a lot of the articles in the books at the library. 580 tons of soil was affected by the depleted uranium. That wouldn't have an impact on the water there? Why hasn't a test been done to test the water for radioactivity?*

[Don Vanderkar of Aerojet speaking] I'm not sure of your reference to 580 tons... We removed a substantial amount of depleted uranium contaminated soil from the site

How much?

[Don Vanderkar of Aerojet speaking] I could not tell you the volume.

You don't know? Not even a guesstimate?

[Don Vanderkar of Aerojet speaking] No, I do not know the amount

Who would know that?

[Don Vanderkar of Aerojet speaking] It is in our records. We could certainly provide that number

And what are popping ovens, and why didn't the EPA...why did they want you to refer to them as incinerators? Was any of the depleted uranium disposed of through popping ovens, thermal treatment units of any kind? The area known as the Steppes, the Ranch Steppes area?

[Don Vanderkar of Aerojet speaking] Depleted uranium had absolutely nothing to do with incinerators or the popping oven. Depleted uranium was dealt with completely different. Popping ovens are a metal structure...was a popping oven... was a metal structure in which ordnance was detonated in a confined space with steel. Incinerators were different (END OF TAPE SIDE) Both sites were closed as part of the open burn-open detonation work plan which was approved by the State and which, as I mentioned earlier, that work is completed. The only thing left is some confirmation sampling.

Okay, I have a letter here saying that with the removal of the oven as a safe means of explosive detonation, we have to be forced to adopt alternate methods which present greater hazards to our personnel. What kind of hazards are those? Isn't depleted uranium one of the ordnance that you were testing up there?

[Don Vanderkar of Aerojet speaking] What we were testing were depleted uranium penetrators. They are a round cylinder of the metal, the depleted uranium, which were fired and were designed to penetrate armor. They do not explode in the sense that the high energy incendiary explosive ordnance did. The popping oven was designed to deal with ordnance of a certain type of explosion. There were other ordnance on the site that had to be detonated by the standard method, which is burial and controlled detonation as these ordnance were uncovered. They are totally different processes. There was no depleted uranium related to the incineration or the popping ovens.

29 *Has there been any areas of the site, or is there any portion of the site at all that is already been deemed clean, and that is a closed aspect that the State or the Department of Health that has to do with the radioactive material...Has any part of the site been deemed clean and is now a closed case?*

[Don Vanderkar of Aerojet speaking] Yes.

Which parts are those?

[Don Vanderkar of Aerojet speaking] I don't recall the specific areas. They are in the documents that have been submitted to the radiologic health branch of the Department of Health Services. They are on record. They are available. In fact, I believe one set was put into the library, but we can certainly make those documents available.

How much depleted uranium is still currently on the site?

[Don Vanderkar of Aerojet speaking] I couldn't give you a quantity. There's a relatively small amount. The previous work that we have done has removed the vast majority, I would say

probably 99% of it. There was a small amount of depleted uranium found since the last remediation effort that was performed. That will be cleaned up as a final process in the remediation of the depleted uranium. The rest of the ... as part of the SWMU remediation, we will have health physicists out to monitor to make sure, in all the material that is removed, that there is no depleted uranium associated with those areas.

30

What's the transportation site for all the waste that the trucks go? What routes do you use?

[Don Vanderkar of Aerojet speaking] All of the material that has left the site, to my knowledge, well, there was a standard route established that approved by the sheriff's department and I believe the city as well. That was the alignment that went along the back of the subdivision and out to, I believe, Highway 71.

That would be Woodview Road?

[Don Vanderkar of Aerojet speaking] Yes.

31

I also ask that an environmental impact report be done. I think that with Aerojet's involvement in the Rancho Cordova incident and also their involvement in Azusa and just the general nature of all of the different toxic substances that are on this site and the tonnage involved, that an environmental impact report is absolutely necessary. The sites.... My son goes to the closest school, closest to that site. How long was the depleted uranium on the site before it was cleaned up, and what are the effects of it just being out in the open? I noticed, I got some other information off the internet that in 1987 and 1990, the US Army issued guidelines of depleted uranium emissions and depleted uranium contaminated vehicles. It includes instructions for firefighters that must wear self-contained breathing apparatuses, protective clothing, and gloves when approaching a burning tank. If you guys were shooting off these things like war scenarios, and that's a very small distance from my home, I'd like to know the effects of that. What have the effects been? Is there somebody from the State here that can answer that, from the Department of Health?

[Don Vanderkar of Aerojet speaking] I would appreciate it if the State is willing to speak. While you're coming up, let me make one comment about the ... I think there's some confusion about the ordnance that explodes and the penetrators from depleted uranium. The depleted uranium, again, is a cylinder probably about the size of my pen that is fired into armor to test penetration of the armor. It's also fired for accuracy. Those projectiles were fired into a reinforced concrete box filled with sand to contain them. That sand was periodically processed to remove the depleted uranium projectiles. They were containerized and off-hauled. I think if the State is willing to speak to this, it would be appreciated.

Could you talk about oxidation also?

[Jeff Wong of the Department of Health Services speaking] Well, to try to highlight your questions... questions about the areas that were released. I don't know all the ranges that were released previously... range number 1-C, 12-A, 16, 17... again, I'm sorry I don't know it off the top of my head. After Aerojet provided us their documentation for release, we reviewed their documentation formed our own confirmation survey. Again, that was done in 1993. They have provided us with a new sampling plan, a current sampling plan for these other areas that they want to release. 12-A or 7-C, I'm sorry again, and also the Sandbox area. They submitted plans, which we made comments to. They have proposed doing a 100% scan of the impacted area using

sensitive radiation detectors. We'll go back and do that confirmation. Again, we're sampling for soil, reanalyzing it for the uranium. The limits that we're talking about were derived, we're getting guidance by the Nuclear Regulatory Commission. They have determined what the release criteria should be for depleted uranium, which the State of California has agreed in a statement that we would adopt the Regulatory Commission's guidelines. In Aerojet's sampling plan, which we commented on and ultimately accepted, they have proposed reduction of... meeting that criteria, but also having some administrative guide of 50% even... to reduce that accepted criteria. There's also criterias for besides soil for surface contamination – buildings, equipment. We don't want any depleted uranium left on the surface that can be removed. I believe Aerojet's administrative guide again is for fixed contamination, would be 50% of our State of California's release criteria, and even 10% of the removable contamination. Their plan is conservative, and again, if history serves us correctly, when we reconfirm the sampling and the survey that was done since 1993, they meet that criteria.

That criteria was from the Department of Energy, which is the ones that gave them the nuclear waste to make the make the stuff out of in the first place.

No, no. It's from the Nuclear Regulatory Commission which is separate from the Department of Energy.

(INAUDIBLE QUESTION)

It was the guideline for release criteria of '81. That was the release criteria as established by the NCR in '81.

Just another of couple questions about the water....

We need to go on to the speaker, Dick Ridinger.

(APPLAUSE)

32 *My name is Dick Ridinger. I live on Bay Berry Drive. Congressman Miller was supposed to have a representative here. If you're here, would you raise your hand please where I can see you? I thought so, thank you. I want to address something that Debbie brought up that I don't think was quite clarified. If you have a stream coming down a hill, and it narrows in a real narrow spot, the water goes by real fast. Any contaminants in that would have less chance of stopping, being deposited or measured compared to further down the stream where the stream would widen out or even become a pond. I think that's what she was saying, that you have to go much further out to check the water and etceteras. Anyway, I wanted to ask....may I call you gentlemen from Aerojet by your first names please?*

[Don Vanderkar of Aerojet speaking] Absolutely.

33 *Joe, you said you had nine people from Aerojet to help you out. Did that cover all 41 years that Aerojet was there? Did you have somebody from 1954 representing and other people representing each and every one of those years?*

[Don Vanderkar of Aerojet speaking] We had eight people, and the furthest back was 1960. '60 to current.

34 *So everything before 1960, you don't know what happened. Okay. Don, you're in the hot seat tonight. At the Aerojet meeting a couple of weeks ago and I think you said tonight that there was no manufacture of any chemicals, that it was just assembly that you did there. Yet we go to the library and see in your documents the words "manufacture of organic chemicals" etceteras, etceteras, throughout the documents. Do you want to explain the discrepancy that you have, telling us that there was no manufacturing and your documents say there is?*

[Don Vanderkar of Aerojet speaking] I do not recall reading in the documents the manufacture of chemicals. I think Joe wants to speak to that. But the reality is that we did *test* the chemicals in laboratory batches. Joe?

[Joe Bahde of McLaren/Hart speaking] Just to clarify.... Yes, you are right. We do use the term manufacturing in some of the older documents. I came across it several times while reviewing those. As Don mentioned, it is in there. The term manufacturing should not have been used

(INAUDIBLE)

I understand that, but now you're telling me Aerojet's documents are not reliable and the information....yes, you are, you just got through saying that. Let me finish.

[Don Vanderkar of Aerojet speaking] No, I did not say that.

Well, you said they were not reliable, we hear...

[Don Vanderkar of Aerojet speaking] They are reliable. I used the wrong word.
(INAUDIBLE) I did say manufacturing.

Yeah, I realize that, but it says manufacturing in the documents, and we have Don telling us there was no manufacturing.

[Don Vanderkar of Aerojet speaking] There's a difference between an inappropriate word in a document and the reality.

But when I read it, it says manufacturing...

[Don Vanderkar of Aerojet speaking] I know, and I apologize for that.

We'll move on.

[Don Vanderkar of Aerojet speaking] Let's get on the record, by the way, you know. Let's make sure we state here very loudly and clearly. There were no chemicals manufactured at the Arrowhead Chino Hills facility based on our investigation. However, they assembled and tested chemicals there. That is the record. If we have anywhere stated manufacturing, call that error. That's my responsibility. I take responsibility for that.

You'll issue an addendum to all the paperwork, correct?

[Don Vanderkar of Aerojet speaking] We have already done that. We have corrected, basically, in the subsequent documents, as we have described the operations, and that is the statement, and that's the true statement.

At the last meeting, we asked for a generic listing of all health problems of all employees over the last 41 years. How close are we to getting that, Don?

[Don Vanderkar of Aerojet speaking] Health records of individuals are not available for release, and that's just the way it is.

We're asking for a generic, no names, no address, no description of the employee. We're asking for a generic. We have employee 1. He broke his foot. Employee 2...we don't want to tie it back to anybody. We made that clear at the last meeting.

[Don Vanderkar of Aerojet speaking] We will certainly look at the records and see what we can put together. I do not know the availability of the records. That's not my department.

It is the policy of every company in this country not to provide health records.

DICK: *We didn't ask for them. Sir, I know that is true, but...I asked for a generic record.*

LB: Uh, Dick, if we could kind of... I think the question's been answered, if we could focus on...

35 [DICK: *Okay. I would also like to see a forensic evaluation of all contracts and job orders issued for one Aerojet plant to this plant. I would like to see a study and see what we can find out. There's a lot of classified information up there. Some chemicals, they don't know what they are. There's over hundreds of chemicals used. We all know what you get when you multiply 3 to the cube root, you get 27. But then you have all the possibilities – what quantities, what period of time, etceteras. So we have unknown chemicals mixed with hundreds of chemicals that they do identify plus the chemicals already in the earth, plus the chemicals already in the atmosphere, and they say it's safe. Now, we assume that you said it was safe. You won't get the information on 1995 until about 2020. I'll be very brief. We ask for a tour of the site based on the fact that you said it was safe for humans.*

[Don Vanderkar of Aerojet speaking] What I said in the previous meeting is that the residents in the area have no reason to be concerned, and I stand behind that statement. We are in the process of remediating an ordnance test facility. We are willing to allow officials such as the city or... The State of course has direct oversight and have been on the site many times. We simply cannot open the site up to people until the site has been remediated

(INAUDIBLE)

Sure, we would welcome the press to join in the tour of appropriate officials.

36 [I think we ought to have a tour up there for interested people. I don't know what you would have to hide up there. Okay, gentlemen. I think I covered just about everything. We do need a health survey of the areas, by areas, and we do need that.

Thanks, Dick.

(APPLAUSE)

Duane Thompson?

31 *My name is Duane Thompson. I live on Observation Lane. I'd like to thank you Mayor Larson, Councilwoman Perry, Councilman Wickman, and members of the public. I think we're hearing some really good questions here. I have a few questions. I was a little confused. There was something about, you've been under regulatory compliance, or you've been in regulatory compliance since 1979 or 1980. What happened before then? You said that in 1964 you were dealing with blister gas, CX, nerve gas, and you had pond discharge in 1972?*

[Don Vanderkar of Aerojet speaking] The federal laws, and I can't give you the date of enactment for all of them, came into effect basically in the 80's for the most part. Some may have been before that. The Clean Water Act I believe was somewhere around '79 or '80, and that would have been when the regional board would have assumed an oversight role relative to the release of waters from a site. They did, in fact, do that, and our records indicate that they were active at the site. Then, of course, I mentioned when the State Department Toxic Substances Control got involved when RCRA (Resource Conservation Recovery Act) was enacted. Prior to that time, to the best of my knowledge, there was not regulatory oversight because it was not the law of the land.

38 *Scary. I've heard something about missing records. What kind of records are missing?*

[Don Vanderkar of Aerojet speaking] We have reviewed all of the records that are available. I cannot say that records are *missing*. Businesses usually follow standard procedures for keeping records for a certain number of years. We have gone through all of the records that are available. I'm not sure what you heard about missing records.

Do you have any records that go before 1979?

[Don Vanderkar of Aerojet speaking] I don't know.

Who does? I thought we were going to find out this stuff tonight.

[Don Vanderkar of Aerojet speaking] I think Joe Bahde went back and looked through the majority of the records. The previous consultant Jay Kim also went through records and wrote up their report based on what they reviewed. I have gone through a lot of the records, but I haven't memorized the dates of all the documents.

So there really could be missing records. Or should I say there definitely are missing records? Let me put it differently. We're sure that in 1964 we had nerve gas, blister gas, and CX and pond discharge in 1972. Are you sure you have records going back that far?

[Don Vanderkar of Aerojet speaking] The inference, of course, is obvious, that we haven't done a thorough job. If the records are available, we have looked. We have done the best job that we possibly could to investigate this site and to find how to remediate it. It seems to me that it would be obvious if we're doing our work... if I'm doing my work for Aerojet, we want to make sure that the site is remediated as best it possibly can so that there is no liability left there for the company. It only makes sense. And that's what we have done.

39 *Another question. On path of migration, it got pointed out that it got pointed really strongly to geology, but I didn't hear anything about airborne or tramp dust or things from the burn pit. That was a process that was legal at one point that they wouldn't even think of allowing now. Eighteen or nineteen trucks of perchlorated soil were removed. Why didn't we do any air monitoring? At that point? I'm really upset because we're doing this now. I've been on the list from you guys for years to get information about that site. I'm really upset that they didn't give us the chance to request air monitoring before they started pulling out trucks. Now you're saying the site's 98% clear. Isn't that a little late?*

(APPLAUSE)

[Joe Bahde of McLaren/Hart speaking] That reference was.... My reference to the percentage was... had to do with the depleted uranium, and there was air monitoring conducted during that process to make sure there was no contamination in the air. As to the open burn pits, I don't recall if we did on-site monitoring at that time. I was present during a lot of that period, and there was excellent dust control. We had water wagons and hoses working essentially all the time.

40 *Has radar been used to detect ground water or springs? Have we used... what other manners have we used to detect water? This is an area where we do have water that goes in directions you wouldn't expect it to. I mean, I've heard you say it's really solid, it doesn't.... For example, there's water that seeps up on the road to the Western Hill Golf Course. There's water seeping out of the road all the time. We have a lot of underground springs, and you mentioned springs on the site.*

[Hassan Amini of McLaren/Hart speaking] I indicated on my schematic diagram there, sir, the... our model for the seepages. Every seepage that we have observed at the facility practically, we have sampled. We have been very curious about whether or not any of the bedding planes and the fractures will be the path of migration in any occasion that we have detected any chemicals in the soil. The fact of the matter is that, with DTSC's oversight, we have stepped out... and in fact, this question came out before, I think... I can't remember. One of the questions was what is the proper... I think that was Debbie, if I may call you by your first name, by the way... What is the procedure for step out and so on and so forth. Any time that we have had any detection of any chemical, we have stepped out in that direction and taken samples. If we have missed anything, DTSC has stopped us and brought that to our attention. Paul Carpenter is sitting here, assisting Ms. Brown and Mr. Senga. We have had many many conversations and communication with these folks, showing them our justification for additional sampling laterally and vertically. If we don't detect material as we go to the depth, what is... what am I going to be sampling for? We are simply following a very systematic way and methodical way of sampling.

41 *For example, you said the water hasn't been tested for radioactivity, but I think you're telling me you're not really sure you know where the water goes right now?*

[Hassan Amini of McLaren/Hart speaking] Radioactivity was not part of our investigation, by the way. That is a totally separate investigation. I cannot even comment on that. Don Vanderkar and gentlemen from DHS are addressing that issue. In terms of every other chemical we have detected, we have sampled... in any place we have detected any chemical, we have stepped out laterally and vertically.

42

I have two more quick questions, or three more quick quick questions. Has anybody done any testing on the long term effects of perchlorate on the endocrine system? The human endocrine system?

[Don Vanderkar of Aerojet speaking] There have been numerous tests conducted on perchlorate. I'm aware that there has recently been a very detailed animal study on the effects of perchlorate, and that's being reviewed by EPA, considering changing or establishing a standard. There's only an interim standard in the State of California right now. So, I'm certainly not an expert in that area, and from my work, I'm aware that there has been extensive studies. In fact, in a previous meeting, I commented and was taken to task for the comment, but it is true, that perchlorate has been used in this country, and is still used some places in the world as a prescribed medicine. There is a lot of human health data from that process.

Has anybody done any follow-up health tests on people who were exposed to the depleted uranium or perchlorate? In other words, they had badges on that said what their exposure was on the outside, but if it was like asbestos, you might only get some quantity, but once you get it, it may not leave if you inhale it, for example? Has anybody done follow-up testing on employees? I think your answer was no on that.

[Don Vanderkar of Aerojet speaking] I'm not aware of any follow-up, and again this may be something that the Department of Health Service would like to speak to. I believe that the badges... monitoring radiation is something that has been performed for some period of time, and there's a pretty solid background of information. The testing, I think, is based on a sound basis of information. I would have to defer to Jeff on that point.

I'm talking about maybe inhaling the dust from it because you're talking about something that's going to poof when it goes through the metal and hits the sand, or whatever it is.

[Jeff Wong of the Department of Health Services speaking] From the licensing point of view, based on when we licensed the facility.... Based on the type of material, what form it is, how much, what we'd do is probably require a demonstration of personnel (INAUDIBLE) ... the whole body badges. Also, we'd probably require extremity badges. Ring fingers...excuse me, ring badges if they're actually going to handle the material. Also, a license would require bioassays, measurements of occupational workers of their urine or fecal material. Again, that's all part of the license requirement, and compliance will verify during their periodic review for the records of the occupational workers for monitoring and exposure levels.

So you do have records on employees in terms of...

[Jeff Wong of the Department of Health Services speaking] The branch does not. They're reviewed at the compliance. They're reviewed when the inspection is done.

43

Last question. This is all real complicated stuff, and I'm not a chemist or scientist. I asked before about a technical assistance grant. Are you getting anywhere on that? And I'm done. Thank you very much.

Thanks Duane. I think Vicki can answer that.

[Vicki Tamoush of DTSC speaking] Thank you. I actually tried to reach you the day after our public hearing to let you know the answer to that more quickly. I'm sorry I couldn't reach you by

phone. I tried a number of times. The answer is that those grants are available to Superfund sites, a designation that US EPA makes, and this is not one of those sites, so it wouldn't be available for this site. But I do have information on how you can find out more on the internet, and I didn't bring with me. Sorry, I didn't know I would see you tonight. If you don't mind to phone me tomorrow, or tell me where I can phone you tomorrow, I'd be happy to give you where you can get that off the internet.

Karen Miller

44
Council and concerned citizens, I didn't plan to speak tonight, but Don, the project manager, mentioned about the trucks again, and I know this lady with the blond hair in the front row here answered part of it a couple weeks ago on May 13th. I live on Medlar and Ferree. I have a direct view of the trucks leaving at night. I walk my dog late, 11:00 to 1:00 in the morning. I have witnessed the trucks coming down with the tarps. They're double trucks. This lady here told me that, according to the records provided her, they were in 1993, there was some removal, in November of 1998, and I believe I've seen a lot more activity than those two statements and what has been given to her. If you stood on my front lawn, you could see coming down at night. I have seen the trucks of equipment in the daylight, moving in. There is a record, I'm sure, of a trucking company that has been removing this soil, or whatever.

I think the question is, are there any records as to the total number of trucks over time that have moved materials. And dates.

That, and what was answered to me on May 13th was 1993 and November of 1998, and I have seen a lot more than that.

The Department of Toxic Substances Control did not monitor the removal of the depleted uranium. That was done separately, so they would not have had records on that. And again, I am relying on what I have been told about what happened at the site.

Okay, but a project manager, in removing something like this... and I didn't even have an idea of what was going on. I happened to mention to the Whaleys, my neighbors and several of the people that... like, what's going on? And it wasn't until I got involved that I realized, wow, here I've just been watching this caravan and not knowing anything about it. No one was ever knocking on my door saying, "You know what? You know, this is what's going to take place, or this is what's going to happen."

Well, obviously this has been a pretty good-sized operation. There have been lots of different kinds of trucks and equipment going in and out of the site. And the specific concerns about the trucks removing soil and the tarps securing the soil from any dust flying I think is what we need to focus on. The contractor may well have gone up and down with trucks for other purposes like filling the water tank. I know that truck goes up and down...

(INAUDIBLE)

And again, I have no reason to doubt you. I was relying on information given to me. Trucks went in and out at night, they went in and out at night. All I can do is assure you that as we go into this remediation, we will make sure that that does not happen.

But if you've done it in the past, and it's some kind of record...I mean, shouldn't we be concerned that it was done in maybe not the best proper removal?

[Don Vanderkar of Aerojet speaking] Certainly, and you have every reason to be concerned. We will be operating under a permit to follow that road. We will be operating under the oversight of a regulatory agency, and we will have to follow the requirements that are laid down.

Is there any way for this committee...there seems to be a very active committee now...to find out how many trucks and what month and just some general information? Not that we can do anything about it now, but maybe we can say there might be some health hazards caused because of this? And I'm really a layman on this kind of subject, but I am a witness.

[Don Vanderkar of Aerojet speaking] I think you're asking about historic information about when the trucks left the site. And I believe that those records are available, and I will see if I can put them together.

Can you find out if it was done...if it was really contaminated soil? (INAUDIBLE)

[Don Vanderkar of Aerojet speaking] Well, and that was going to be my next point. And I do appreciate your concern. The depleted uranium was containerized. Those trucks were secure. The other material that has left the site were not hazardous material. We wanted them secure, we want them secure in the future so there is no dust released, but those were not hazardous materials that came down the hill.

(INAUDIBLE)

[Don Vanderkar of Aerojet speaking] There were several different things that happened. Joe mentioned the fact that we removed the perchlorate-contaminated soil. We did an analysis, and that is not RCRA hazardous waste. That is not hazardous material. The other, the removal of the gasoline tank... there were I don't know how many yards or tons of material there. There were many many trucks that left, containing that contaminated soil. That was contaminated with gasoline and oil products. 300 yards. Okay. But again, Joe, is it not true that that was not hazardous waste? And it's the same type of thing that's going on all over as gas stations are being remediated because gas tanks have been found to leak. Another type of waste that was hauled was part of the cleanup of the open burn-open detonation area. There were materials that were dug up that did not meet the State standard to be left at the site. The standard was 3 parts per million of RDX, and we had exceedences of that. That soil was removed and stockpiled, and then it was hauled off in trucks. That material was not hazardous material because the concentration in that soil did not meet the standard for hazardous. It simply was not hazardous material.

(INAUDIBLE)

Burning took place at the site before 1995. The facility was shut down in 1995. The Aerojet public hearing, I believe it was on the 25th, the fire chief told of the burning operations that he was involved with. There was burning of brush at the site. There were these training exercises within some of the buildings, and so there was burning and there were emergency trucks at the site for those purposes. And also, periodically, there have been grass fires that have gone through the site.

(INAUDIBLE)

The questions about the loads of trucks? I'll see what I can do.

We have four more speakers that have turned in slips. I did want to indicate that we were trying to get everybody out of here around 9:00. We certainly want to get the questions answered, but if we can avoid maybe duplicating some we may have already. Okay, the next speaker is...

Raymond Kerr.

45 *Members of the City Council, it's a pleasure to stand before you. My name is Raymond Kerr, and I've had the opportunity for the last twelve years to call Chino Hills my home. I enjoy living here very much. I have a couple of issues I would like some clarification if possible on. The first one is this meeting is outlined as a discussion relating to the proposed cleanup. I have sat through the last two or three meetings that have gone on, and I have heard more of what's been cleaned up than actual cleanup. I want to know what percent has already been cleaned up on this property, and are we bickering over the last 10% or what? We've heard truckloads, we've had uranium, water... We've had tons of things already done. Of the total project, what percentage is really left to be done?*

[Don Vanderkar of Aerojet speaking] There essentially are two different, actually three different projects that we're talking about. The depleted uranium, we've explained previously, is not part of the Department of Toxic Substances Control work. 90%+ of that has been done. There was work done back in, I believe 1991-'92, and there was a report submitted in '93. There was work done that resulted in a report being submitted, I believe, in '96. And so that was when that cleanup was done. Under the DTSC's control were two primary projects. One was the open burn- open detonation. That work was initiated back in '94. I think we had an order to do that in '93. It was started in '94, and it took several years because we got caught in some heavy rains, and it was a very large project. That work is essentially complete. There were some areas on this removal of the stockpile of contaminated material that has to be confirmation samples under that, and there has to be some additional ordnance sweeps before that job can be finally, officially completed. So that job, again, is almost entirely completed. The other portion of the State DTSC oversight has to do with what we've been calling SWMUs – Solid Waste Management Units. That work has not been done. That work is what the public hearing that the State ordered, or conducted, was for, was to discuss what had been done to investigate the site, what corrective measures were defined, and to get public input specifically on how to remediate the site.

So what percent is left? Of the cleanup. I mean, you've been cleaning up the site...

[Don Vanderkar of Aerojet speaking] Cleaning up the total site? What percentage is left? I'm not sure how to measure it. If we measure it in terms of yards of material to be processed, I'm going to guess maybe 25%.

46 *Okay, the next area I would like to address, we've heard about soil samples, water samples, air samples, but we have not heard about any studies on the possible effects that Aerojet has, since they've been here for 40 years, on people. I unfortunately take this area very personal. A year and a half ago, I lost a 2 ½ year old son to cancer. He had a rare cancer that, within the United States, there's only 500-600 cases per year. Within Chino Hills, there has been my son, I know of another young man that has passed away, and I know of another little girl that has*

46 *the same type of cancer. It puts a very high percent within a small community to address that. And it's only one type of childhood cancer. I would really request that there are some cluster cancer studies done within the area, that other health effects on the human population be studies, that as a community we really look and see what has already had effect on us, regardless of the air pollutants or what happens on the cleanup, we should study and see if there is any correlation. There may be, and there may not be. I'm not making any judgement. I'm just saying that it raises a red flag to me, that there's that high a concentration of some cancers and other health problems, and that the Department of Health possibly should be involved or other agencies that study these type of situations. And as citizens, we can feel confident that there have not been any past effects, any future effects to ourselves or to our families and children. I know nobody can really address that issue, but as the city council, I would strongly request whatever is within your power spectrum, for the health of our community and for our peace of mind that this issue be investigated and researched, and that there are some benchmarks established if there is any problem. As far as I know, Aerojet is really the only contributor of anything in the area. Most everything else is homes and families. I appreciate your time.*

(APPLAUSE)

Pam Swift?

[Jim Marxen of DTSC speaking] I just want to say something. And it is a tragedy I have worked in communities where there have been childhood cancers, and I've sat many nights with parents who have lost their children. I feel a sense of sorrow when something like that occurs in a community. There is an agency in the State, of course, that works on these kinds of issues, and you mentioned the Department of Health Services I'd like to talk to you after the meeting and get your name and any other information you have about that, and I will pass that information on to those people, and I will give you the names of people that you yourself can contact. My name is Jim Marxen, and I work for the Department of Toxic Substances Control.

Pam Swift?

47 *Thank you. My name is Pam Swift. I'm a homeowner and a business owner in Chino Hills. One of the benefits of being one of the last people I guess is most of my questions were answered already or at least touched upon. I just want to comment. There's a laundry list of things I think we need to do. One is, the gentleman asked about a generic list of employees and their illnesses. My concern is that there are questions about lawsuits. There's a difference between worker's compensation claims and lawsuits, and I just don't want there to be a play-on-words here. We need to know about worker's compensation claims. I think asking for a generic list is a legitimate thing to ask for. We're not asking for personal information that would be private to the people, that cannot be disclosed. But what we can get is a list of worker's compensation claims, what those worker's compensation claims related to. If it's stubbing a toe, then we don't really care about it, but if it's something having to do with chemicals, with hazardous waste, something that our community is concerned about, and I think it's touched a personal level for a lot of people here, and that is what is it doing to our children, what is it doing to us as residents. I live and work here. I'm always here. What's it doing to me? What's it doing to my children? That's something that needs to be touched upon. I've also heard a number of questions of, well, to my knowledge.... Sir, I apologize, but I don't remember your name, but you didn't have that information. Somebody does have this information. When are going to get to the bottom of that? Is this over with June 30th or are we*

47 *going to still have an opportunity to get answers to our questions, and not just answering the questions as to what the causes are if some of this cancer that we're experiencing in our community has to do with anything that Aerojet did, but what can we do about it? Not just getting the information, but what can we do about it. And I guess, to the city council my question is, is there anything the city can do, and if you don't know maybe the State, but somebody's got to have this information for us.*

As far as which area the city can do, I guess I'm asking for more specifics.

Well, in terms of getting this information that we've asked. There have been a lot of questions asked that have been glossed over. There have not been direct answers to the questions. There are questions about lawsuits. Sure, there's been a myriad of lawsuits, but let's get a list of these lawsuits, and what are personal injury in terms of slip and falls or something like that versus a car accident with somebody with Aerojet versus what is actually related to the complaints that we have.....(END OF TAPE 2)

Again, why don't you submit that as a comment and we'll see if we can pass that on to Cal Osha

Thanks. We have two more speakers, if we could, then I'll just make a couple of concluding comments.

Steve Taylor.

48 *Yes, I just wanted to know..... Have they tested the water behind the Carbon Canyon Regional Park. All this water drains to the west. Five years ago there was a documented case of two bicycle riders that were cooling off in one of the streams and have skin problems now.*

[representative from McLaren/Hart speaking] We tested the water at the property line of the site and then we went downstream as far as we could because the stream dried up, took samples at that point. At that point, the quality... there was no detectable chemicals in the water. We have not gone down to Carbon Canyon and tested the water

That is a public facility down there. (INAUDIBLE) Y'all just stated that the ground up here is real tight soil, and that (INAUDIBLE) every time we have El Nino it runs for a year and a half.

[Hassan Amini of McLaren/Hart speaking] I had mentioned, sir, that those surficial sediments at the bottom of the canyon do have some water retention capacity that they absorb water and they slowly bleed that water to the stream.

It's not that it's slowly bleeding. It's running pretty well most of the year.

[Hassan Amini of McLaren/Hart speaking] I'm aware that this has been a very exceptional wet period. I'm talking about the last couple years. And I'm not surprised at that, because of the tightness of the soil. Every time we have precipitation. you know that that 14 inches of rain in this area doesn't come down one inch a month. It does come down in downpours in very particular seasons. The earth will absorb water and then will release the water. During the peak storms you will have a substantial amount of water. If you look at the area of the collection of the Soquel Creek, there's quite a bit of side tributaries coming to that. One of those, in fact, is coming from Aerojet. Beyond the confluence of some of these, you don't find any chemicals at

least detected in the samples that we have taken here. But you're absolutely right. If there is any chemical released at this site, you should be able to detect it along the Soquel Canyon Creek.

49

I've lived here for 25 years. That creek runs right through my back yard. On a dry year that creek will run 'til July before it will dry out. Once we start getting rainstorms again, it will run until next summer.

[Hassan Amini of McLaren/Hart speaking] You are on that, more credible than any of us, so you make an observation and I believe you.

(INAUDIBLE)

[Hassan Amini of McLaren/Hart speaking] By the way, we did not really take that as a reason not to sample. Joe and I, anytime that we saw a dry creek... Dick, you mentioned something very important. At the very narrow part of the canyon, water is going to be moving very fast, so you don't have any collection chance. You go to an area that you do have a little bit of a bar and the collection of the sediments, and we do collect from those locations to be sure that... if we don't have a chance to collect water, we collect the samples from the stream bed, which at the time of flooding is going to be in transport basically. So that's been our methodology.

(INAUDIBLE)

[Hassan Amini of McLaren/Hart speaking] In any of those major canyons, as you go down to the bottom of the canyon and dig down to the surface deposits where it is in contact with solid bedrock, you're going to get a collection of water.

This isn't bedrock, this is clay.

[Hassan Amini of McLaren/Hart speaking] What I mean by bedrock, that's technically to us, the point of formation is the bedrock here. I don't mean granite and stuff like that. I mean, that is at about 4000, 5000 feet depth. I don't mean hard bedrock. These clays, as soft as they are, as they absorb water, they swell and they shut down (INAUDIBLE) And in terms of inhibiting contamination movement downward, I think that's one of the greatest things that happened here. They selected this site, and in fact there's no chance for this stuff to move down to sub-surface because ...

(INAUDIBLE)

[Hassan Amini of McLaren/Hart speaking] If I may answer this one last one... I do respect, by the way... I do agree with all those observations. They are collections of near surface water at the bottom of the surficial deposits. We have been sampling those any time we have a chance. And in fact the Red Water Pond area that Joe mentioned some of the samples and some of the cleanups that we're going to be doing is one of those cases. We don't dispute that. You're absolutely right.

50

Red Water Pond. Is that a lined pond or an unlined pond?

[representative from Aerojet or McLaren/Hart speaking] Regardless, there's an impact. That was an unlined pond, wasn't it? There is an impact to this sub-surface soil and that is part of the remediation.

(INAUDIBLE)

[Hassan Amini of McLaren/Hart speaking] No sir, there are water samples collected at about 42 foot depth. Was it 80 feet? That 80 feet sample by the way did not show any detection.

(INAUDIBLE)

Okay, I think we've pretty well focused on what that question is, and they know what they need to do. Okay, last speaker would be Matt Covin... The question is, they need to respond to that question in terms of that test, so they'll take care of that. At least that's my understanding, is that you will do whatever test you need to do.

[Don Vanderkar of Aerojet speaking] I think the specific answer is that we will remediate that site, and we will remove the water and the contaminated soil until there is none left

51
Hello, my name is Matt. I'm not a member here of Chino Hills, but my sister's family lives in Summit Ranch, and I'm here on behalf of their family. I typed this up. I tried to make it legal-shmegal, but I'll just read the last bit of it here. We're at the end of our day. Caitlin Jean Seckington was diagnosed in December of 1998 with a rare form of cancer called neuroblastoma. At the time she was diagnosed, she was aged 4. She is currently age 5 to date and is still in the process of being treated, i.e. chemotherapy. Caitlin Jean Seckington lives at... I don't want to state the address, but it is in Summit Ranch which is just below there. This location is within approximately one mile of the Aerojet facility. I, Matthew Patrick Hooven, uncle to Caitlin Jean Seckington, state to the best of my ability that the above statement is true. And I'd just like to say one, there may not be a correlation - there may be, I don't know, but I think if it wasn't such a serious issue, it would be somewhat of a black comedy with the State mess. It could be. But I think this is a very serious and emotional issue for a lot of people, and I know you guys are taking it serious. That's all I'd like to say.

(APPLAUSE)

At this time, I'd like to conclude by first of all, thanking very much the representatives from Aerojet, as well as DTSC for being here this evening and being very patient in their questions and presentations. I'd also like to thank all of our residents and other interested parties for being here and, again, presenting these questions. I would like to reiterate what Jim said a few moments ago. This is the city's meeting. We set it up to provide a forum, to provide a mechanism for all of you to be here and in some cases, again present your questions and hopefully attempt to provide some answers. Again, the comment period runs through 5:00 PM June 30th, and written comments should be submitted to Vicki Tamoush, Department of Toxic Substance Control, 1011 N. Grand Avenue, Glendale, CA 91201, I'm sorry Grand View Avenue. And again, as they say on the radio, Vicki Tamoush, Department of Toxic Substance Control, 1011 N. Grand View Avenue, Glendale, CA 91201. Again, thank you very much.

Could we send a tape of this meeting to DTSC? (INAUDIBLE)

I can certainly see that a copy of the tape is forwarded...

With the appropriate letter requesting (INAUDIBLE)

I will forward the tape indicating that this is the result of a public forum held by the city. I will do that.

I would them to answer the questions on the tape, that's the point.

Dick, what I would suggest that you do again, to reemphasize, each and every individual should submit written comments by this date. I will see that this gets transmitted as a result of the meeting this evening, but I think it's incumbent upon you and all the other individuals with specific questions that you make sure that those get conveyed so that they're responded to by DTSC. June 30th at 5:00 PM.

(INAUDIBLE)

We'll take care of that. And we are adjourned to tomorrow evening at 5:00 PM. Thank you.

B. RESPONSES TO COMMENTS

1. Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments.

Please see the response to General Comment 3
2. Please see the response to General Comment 1. For more information on ordnance, please see the response to comments made by Ms. Judy Morton (question nos. 44 and 49) on pages 58-59, Carol Dobrikin on page 155 and Marianne Napoles on page 163-4. Please also see the response to comments made by Judy Morton on page 138.
3. Please see the response to comments made by Todd and Karen Miller on pages 47-48 and the response to comments made by Ms. Judy Morton (question nos. 23, 24 and 27) on pages 54-56 of this Response to Comments.
4. Please see the response to comments made by Ms. Marjorie Mikels on page 30 of this Response to Comments
5. Please see the memo prepared by Mr. Paul Carpenter, DTSC geologist. This memo is included as Attachment D to this Response to Comments.
6. Please see the response to General Comment 4.
7. Please see the response to comments made by Ms. Judy Morton on page 137 of this Response to Comments.
8. Please see the response to comments made by Ms. Raymond and Heidi Kerr on page 22 of this Response to Comments.

9. Please see the response to comments made by Todd and Karen Miller on pages 47-48 and the response to comments made by Ms. Judy Morton (question nos. 23, 24 and 27) on pages 54-56 of this Response to Comments.
10. Please see the response to General Comment 1 and item 24 in this section. For information regarding the testing of chemical agents at the site, please see the response to comments made by Raymond and Heidi Kerr on page 22.
11. Please see the response to comments made by Ms. Carol Dobrikin on page 155 and Mr. Glenn VanBerriger on page 85 of this Response to Comments.
12. Please see the response to comments made by Ms. Judy Morton (question no. 11) on page 52 of this Response to Comments. Information on truck activities at the site not related to the site cleanup is included in Attachment H.
13. For information on truck activities involving hauling of contaminated soil from the site, please see the response to comments made by Ms. Judy Morton (question nos. 5 through 10) on pages 51-52 of this Response to Comments.
14. Ordnance sweeps have been conducted in the buffer areas, and three SWMUs/AOCs are located in buffer areas. Evaluation of the buffer areas were included as part of the RFI investigation.
15. Please see Section II (pages 2-3) and the Conditions of Approval (included as Attachment B) for further description of the requirements for trucks carrying contaminated soil.
16. Please see Section II for a description of the engineering and administrative controls required for the soil screening process.
17. Please see Section II for a description of the air monitoring requirements that will be implemented as a part of the Corrective Measures.
18. Yes, off site residents will be notified in advance via an advertisement in a local newspaper (Chino Hills Champion and/or Daily Bulletin) regarding the time frame during which trucks will be carrying contaminated soil from the site.
19. Comment noted
20. Please see the response to your earlier comments in Section V on pages 25-46 and Section VI pages 101-104.
21. As a result of concerns expressed by Mr. Ralph Herring, the former Aerojet employee, Aerojet conducted interviews of additional employees and proposed additional areas for investigation. This additional work is described in the RFI Workplan Amendment, dated September 21, 1995. The work is documented in the RFI Report. As stated in this meeting, there was no manufacturing of chemicals occurring at the facility. Chemicals were tested in Building 003 (AOC #11, Chemical Test Area). Please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to comments for further information. For an explanation of the relationship between the cleanup of the

site and future land use, please see the response to comments made by Mr. Steven Hood on page 115 and by Ms. Carol Dobrikin on page 155 of this Response to Comments.

22. Please see the response to comments made by Ms. Judy Morton on pages 137 and 139.
23. For the protection and safety of all persons on the site, the number of persons permitted on site needs to be kept to a minimum. DTSC does not have the authority to require that Aerojet allow private parties on the site; that decision is up to Aerojet. However, it is DTSC's responsibility during the site cleanup process to protect public health and the environment by ensuring that the work is performed properly and safely. We will be overseeing the field work by making periodic field visits and taking split samples. Once the sample is collected, it is split, with one half analyzed by the contract laboratory hired by Aerojet and the other half at DTSC's own laboratory. DTSC will also require Aerojet to provide documentation (Corrective Measures Completion Report) of the field work to DTSC to prove that the work was performed properly. DTSC will review the report and require additional work, if necessary, to ensure that the site is cleaned up adequately.
24. There are possibly two questions that are asked here. The first question asks whether or not DTSC has the authority, and is it part of the site investigation process to go beyond the facility boundary to perform sampling. The second question refers to the "step-out" process used to determine the nature and extent of contamination. The response to the first question is that DTSC has the authority and does require the facility to perform sampling beyond the facility boundary when necessary. Please see the response to comments made by Ms. Lee Ann Williams on page 110 and the response to comments made by Mr. Raymond Kerr on pages 112-113 of this Response to Comments for further explanation. The response to the second question is as follows: The "step-out" procedure consists of evaluating the initial sampling data collected from an area, then, based on the data, collecting and analyzing additional samples further out from the initial samples both laterally and vertically until no contaminants are found in the samples. This process was followed for all SWMUs/AOCs investigated as part of the site investigation at Aerojet.
25. For an explanation as to why an EIR was not prepared for the project, please see the response to General Comment 3.

For information regarding trucks and the procedures that DTSC is requiring Aerojet to follow regarding truck traffic, please see Section II and the response to your question no. 5 on page 51 of this Response to Comments.

The analysis of the potential significant adverse environmental effects of the Corrective Measures is presented in the Initial Study.

The perchlorate found in shallow groundwater at the facility is unlikely to migrate off the site and does not have the potential to affect local water supplies. Please see the response to General Comment 7 for further information. Please also see the response to comments made by Ms. Marjorie Mikels on pages 101-102 and the response to comments made by Mr. Jose Palomo on page 142 of this Response to Comments.

A public participation plan has been developed and a copy of the plan is available for review at the Chino Hills Library. Please also see the response to your letter to DTSC's Director, Mr. Ed Lowry, (DTSC letter dated July 26, 1999).

26. There are two documents being referred to here (in the question and in the response provided in the transcript). One document is the risk assessment performed to evaluate the contamination at the site, and the other document ("risk assessment work plan") refers to the analysis of the potential adverse significant environmental effects, including those to human health, of the Corrective Measures. As stated in item 25, these effects were evaluated in the Initial Study, and no separate "risk assessment" is necessary. The work plan that Robert Senga referred to in the transcript is sometimes required as part of the risk assessment performed to evaluate the contamination at the site. However, DTSC discussed the requirements of the risk assessment for the site with Aerojet verbally, and no workplan for this document was necessary.
27. Please see the response to General Comment 4.
28. For information on the radioactive properties and health effects of uranium, please see the response to General Comment 6. For information regarding the testing of surface water for radioactivity at the Facility, please see the response to General Comment 4. The amount of depleted uranium impacted soil removed from the Facility was approximately 3100 tons.
29. As mentioned in the response to General Comment 4, DTSC will be evaluating the levels of uranium present on the site and will be setting a cleanup standard for uranium based on toxicity.
30. Trucks transporting contaminated soil from the facility will be traveling down Woodview Road to Pipeline, south on Pipeline to Soquel Canyon Drive, and east on Soquel Canyon Drive to the 71 freeway. The truck route is included as Attachment I to this Response to Comments. The soil will be transported to an off site facility for disposal.
31. Please see the response to General Comments 3.

As Don Vanderkar mentioned on page 188-189 of this Response to Comments, depleted uranium penetrators were tested by firing the penetrator into steel sheets (representing the side of a tank) that were placed into a concrete box filled with sand. It is very unlikely that the penetrators tested in this fashion would emit significant quantities of pyrophoric uranium particles into the air since the steel sheets were enclosed in sand. Thus no "war time" scenario existed at the facility which would require implementation of firefighting requirements for fires caused by depleted uranium.
32. Surface water samples were collected at 19 locations, including three off site locations. "Low" points at the facility where water could accumulate were included in the sampling. Please see the response to General Comment 7 for further information.
33. Please see the response to comments made by Ms. Judy Morton (question nos. 23, 24 and 27) on pages 54-56 and the response to comments made by Todd and Karen Miller on pages 47-48 of this Response to Comments for further information.

34. There was no manufacturing of chemicals at Aerojet; various chemicals were tested at Building 003 (AOC #11). Please see the response to comments made by Raymond and Heidi Kerr on page 22 for further information.
35. For information regarding the "unknown chemicals" tested at the facility, please see the response to comments made by Raymond and Heidi Kerr on page 22 of this Response to Comments.
36. Please see the response to General Comment 2. As mentioned in item 23 above, DTSC does not have the authority to require that Aerojet allow private parties on the site
37. For an explanation of the history of hazardous waste law, please see the response to comments made by Mr. Scott Andrus on page 16 of this Response to Comments.
38. The "missing records" may refer to a concern expressed by Ms. Judy Morton that certain of DTSC's files could not be located. These files have now been located.
39. In response to community concerns, DTSC has added additional safeguards to the Corrective Measures to further ensure the safety of the community. Air monitoring and additional requirements regarding truck traffic carrying contaminated soil will be required as part of the Corrective Measures. Please see Section II for further information. DTSC regrets that we did not have better information regarding community concerns prior to public notice of the Corrective Measures

However, there was no health risk to the community from the trucks carrying RDX, perchlorate or petroleum hydrocarbon impacted soil, because the soil contained low concentrations of the contaminants and any amount of soil that may have escaped the truck is too small to cause a significant health effect. Soil contaminated with depleted uranium was transported in enclosed containers, not trucks with tarps.
40. Please see the response to General Comment for information regarding the hydrogeology beneath the site.
41. Please see the response to General Comment 4 for information on DTSC's requirement that Aerojet test surface and groundwater for uranium.
42. For information on the health effects of perchlorate, please see the response to General Comment 6.
43. Please see the response to General Comment 5.
44. For information on the transport of soil contaminated with RDX, perchlorate, petroleum hydrocarbons or depleted uranium, please see the response to comments made by Ms. Judy Morton (question nos. 5 through 10) on pages 51-52. For information on truck activities not involving Aerojet operations, please see the response to comments made by Ms. Judy Morton (question no. 11) on page 52 of this Response to Comments. These latter activities, which included trucks hauling material related to cattle or to the oilfield operations, did occur at night. Information provided by Aerojet regarding these activities is included as Attachment H to this Response to Comments.

45. For a description of the cleanup projects taking place at the site (Closure of the OB/OD Area under the jurisdiction of DTSC, the Corrective Measures under the jurisdiction of DTSC, cleanup of depleted uranium under the jurisdiction of the Department of Health Services, Radiologic Health Branch, and removal of an underground storage tank under the jurisdiction of the San Bernardino County Fire Department), please see the response to comments made by Ms. Judy Morton (comment no. 1 of her June 30, 1999 letter) on page 65 of this Response to Comments.
46. DTSC representatives empathize with the loss of loved ones. Unfortunately, it is not within our legal jurisdiction or expertise to evaluate the effects of past facility operations on the health of the community; rather, these studies are conducted by the Department of Health Services, Environmental Health Investigations Branch. Please see the response to your earlier comment on page 112 and the response to General Comment 2.
47. Private employee health information is not available and cannot be provided under state law. The nature of the exposure to hazardous chemicals experienced by an employee working for Aerojet and the exposure than an off site resident experience would be very different, and employee health information would not be relevant to evaluating the health effects to off site residents from chemicals used at Aerojet. Please see the response to General Comment 2 for the results of a cancer study conducted by Dr. John Morgan of the Desert Sierra Cancer Surveillance Program at Loma Linda Medical Center. You may wish to contact Dr. Morgan directly for further information; his phone number is (909) 799-6181.
48. Soquel Canyon Creek was sampled. For a summary of the surface water sampling conducted at the Facility, please see the response to General Comment 7. There is no evidence to suggest that perchlorate causes "weird skin diseases". Please see the response to General Comment 6 for information on the health effects of perchlorate.
49. Two drainages that run behind the homes north of the facility were tested. Sampling results showed no contamination in the drainages. Please see Attachment G of this Response to Comments for the results of this sampling.
50. The Redwater Pond was an unlined pond into which wastewater from the casting operation (casting of an explosive mixture containing RDX and TNT into ordnance) was poured. As a result, both soil and groundwater beneath the pond have been contaminated with explosive chemicals. The contaminated soil will be excavated and hauled off site as part of the Corrective Measures, and the groundwater in the 35 foot zone will be pumped out. Please see the response to General Comment 7 for further information regarding the groundwater contamination beneath this pond.
51. DTSC representatives empathize with the health concerns of loved ones. It is DTSC's mission to protect human health and the environment, and we have required Aerojet to adhere to stringent standards regarding the site investigation and the cleanup goals.

However, DTSC does not have the authority or expertise to conduct studies of community health that may have resulted from a Facility's past operations. The expertise and legal authority lie with the Department of Health Services, Environmental Health Investigations Branch. Based on the results of the Health Risk Assessment, DTSC believes that there are no health impacts to the off site community from present site

conditions. Please see the response to comments made by Mr. Andre Hernandez on page 21 of this Response to Comments for further explanation. For further information regarding cancer in children in the Chino Hills area, please see the response to General Comment 2

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