

**FILE COPY**

**CERCLA SCOPING MEETING  
December 8-9, 1992**

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Attendance

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| Tizita Bekele    | RWQCB                |            |
| Fred Bowen       | NASA                 | Day 1 only |
| Chuck Buriel     | JPL                  |            |
| Mark Cutler      | Ebasco               |            |
| Don Lafontan     | JPL                  |            |
| Kimberly Lievens | JPL                  | Day 1 only |
| Dan Melchior     | Ebasco               |            |
| Dora Meyer       | NASA                 |            |
| Penny Nakashima  | DTSC                 |            |
| Judy Novelly     | JPL                  |            |
| Bruce Ross       | URS (EPA consultant) |            |
| Michelle Schutz  | EPA                  |            |
| Dan Stalka       | EPA                  |            |
| James Wright     | NASA                 |            |
| Hank Yacoub      | RWQCB                | Day 1 only |

December 8, 1992

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Yacoub asked if NASA/JPL have had difficulty collecting soil samples. A discussion ensued regarding soil vs. soil vapor samples. Yacoub indicated that the RWQCB is heavily in favor of using soil vapor sampling and monitoring rather than dealing with soil samples. The RWQCB feels that drilling using air rotary disturbs the entire area around the boring sufficiently to drive all volatiles from the undisturbed samples.

Yacoub noted that it should be kept in mind that the Raymond Basin is being looked at very seriously as a potential storage area for imported water. This could have a significant impact on how the JPL project proceeds.

Yacoub asked if JPL has any historical water rights in the Raymond Basin. It was agreed that this was unlikely, but that it would be investigated.

Yacoub commented that if JPL extracts groundwater as part of a pump and treat system, the Raymond Basin Water Management Board would charge us based on volume. However, if JPL were to reinject treated water to maintain a zero extraction balance, there would be no fees.

Yacoub said that he feels that what we've done with the City of Pasadena (treatment plant) is a positive step forward. Stralka wondered which signatures JPL would be looking for to indicate the presence of products from solid rocket propellants used at the site, what was in the propellants, and if a records search included these. He commented that JPL should try to find traces of metals from propellants in soils. Stralka directed JPL to determine the signature and components in the propellants.

Stralka noted that JPL should document all of the reasoning for looking for some components and not others, why we looked where we did, why we excluded some areas of the lab from soil the investigation, etc... The documentation may be necessary to maintain trust and credibility with the public through the CERCLA process.

Stralka requested JPL's rationale for selecting Mod-Flow as the ground water flow model.

Nakashima commented that she was under the impression that JPL had used composite soil samples throughout the investigation. This was later cleared up at the meeting. Only well cuttings were composited to determine disposal.

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Stralka wondered if JPL checked for vinyl chloride in soil gas samples. He pointed out that, depending on what equipment was used to run the samples, there may be significant differences in detection limit. Ebasco will check on this.

Stralka wanted to know when JPL will start groundwater modeling. The EPA doesn't want a delay while waiting for all information to be gathered when we could start with the information that we already have. Ebasco noted that the modeling process has already started. Chuck offered to try to work with agencies to agree on format of modeling.

Ross requested contaminant concentration maps correlating with water level contour maps. It would be best to do maps at several snapshots of time throughout the history of the project (when City wells were shutdown, right after well startup, etc...)

Stralka pointed out that EPA has a standard format for ASCII files. EPA will want to have access to our database information. However, Stralka stressed that it is very important that only good quality data is entered into the database.

Bekele outlined the following RWQCB scenario for soil vapor investigations:

- Shallow soil gas survey (6 - 12')
- Install 1/4 - 1/2" vapor wells to just above ground water
- In the same lithology screen every 20' and collect samples at various depths
- Install cluster wells (usually 5 wells per 250' depth)
- Sampling frequency would be dependant on contaminant concentration. You would only have to monitor long enough to establish data. Once soil vapor data stabilized, you would probably go to annual monitoring. Normally, over 1,000 micrograms/liter will require remediation. Below that level should require monitoring but not remediation. She noted that the RWQCB does not have these guidelines in writing.

Bekele stated that the RWQCB believes that it is not possible to get a good soil sample with the current technology and site conditions.

Stralka commented that soil vapor could be considered as an exposure pathway.

Stralka noted that an assessment of soil gas to health risk would have to be an indirect measure. You would have to use vapor screening to determine where to do breathing zone measurements. Analysis for the breathing zone would have to have such low levels that it would be very expensive.

Melchior requested that RWQCB provide written guidance giving criteria for installation, monitoring, and remediation based

on soil vapor. Bekele will provide Chuck with some information and suggest an example of work at a similar site so we can review RWQCB records.

Nakashima is currently putting together a list of ARARs. She will send the list to Chuck and will contact other state agencies to provide their ARARs.

Nakashima stated that she needs to review the Health and Safety Plan. This will be provided with the other draft and final documents.

Nakashima requested the rationale for placement of wells and soil borings. She suggested that JPL put together an explanation of rationale that pulls together tables & data. Cutler pointed out that each quarterly report has a table that summarizes all hits from all previous quarterly sampling events.

Stralka said that he would expect some discussion of ecological impacts along with public health impacts. He commented that JPL should be very concerned with ATSDR for Pasadena and surrounding communities.

Stralka noted that ATSDR will use worst case assessment over 30 years and will hold public meetings. JPL can expect to see ATSDR some time next fall. They are very independent and try to be unobtrusive. Stralka stressed that NASA/JPL should be sure to do public relations work to prepare the public to understand the numbers.

Nakashima stated that DTSC uses the worst case, also.

Schutz stated that letters have been sent to Resource Trustees. She will provide copies of these letters to JPL.

Schutz directed JPL to summarize all data to date (tables for soil and ground water) and to put all players on mailing list for fact sheets.

Nakashima noted that DTSC has separate guidance for public relations. Penny will give JPL a copy and will highlight the differences between theirs and the EPA plan. All agencies concur that JPL should use both plans.

Melchior stated that the analytical samples were being run at Level 4, but only Level 3 documentation is being issued to JPL in order to reduce problems with storage. However, Level 4 will be available, if requested.

Stralka specified that JPL should get the level 4 backup materials to start the initial evaluation of the labs.

Bekele promised to send guidance from RWQCB for sampling to determine disposal restrictions. She said that JPL should look at the EPA document that gives the specifics on handling of derived waste.

Nakashima stated that DTSC follows the EPA document for investigation of derived wastes. Schutz will send us this document. Nakashima said that when waste is analyzed and compared with the TCLP, TTLC or STLC values for that constituent, it is to determine if the waste can be land disposed. To determine if the waste can remain in place, a health risk assessment must be performed.

Nakashima commented that, for risk assessments, the State has different toxicity factors than EPA. DTSC and EPA agree that JPL will need to use the most stringent levels. (In the case of chromium, the State uses only Chrome 6. EPA uses total chromium and assumes that 1/7 is Chrome 6.)

Stralka directed JPL to document the rationale for all decisions on the risk assessment.

Bekele would like to see current and past information on the storage of chemicals on site (where stored, type, quantity).

Bekele also requested a chronology of construction in areas of concern (when it was paved, dug up, etc...). After Cutler stated that accurate information would be very difficult or impossible to obtain, Bekele agreed that just a little more discussion on why we chose certain locations over others for investigation would be sufficient.

Schutz directed JPL to seriously consider breaking into two operable units (GW & soil) that would be focused on at the same time. EPA thinks that they could come to ROD on groundwater long before soil. EPA wants to discuss this at the next meeting.

Schutz requested more information on propellants used at the site.

Schutz suggested taking the phase reports out of the proposed schedule and replacing them with project manager meetings. EPA believes that this will result in cost and schedule savings. Buriel replied that JPL will have to find some way to provide information in a timely fashion without causing problems because information was provided before it was properly understood.

Buril agreed to send the total collection of all reports to date to all members of group. This will include monitoring reports and the Montgomery report (with comments). The QAPP will be sent to the agencies for review pursuant to the FFA schedule.

Nakashima requested a figure showing all wells, borings, and faults.

Schutz informed NASA/JPL that EPA was anticipating Dan McGovern's signature on the FFA next week. The signature will set off the clock for 45 days. Doe Meyer informed Schutz that JPL would be closed for several days over Christmas and New Years. Buril stated that he would be on vacation for two weeks over the holidays. Schutz replied that the holidays would not be taken into account in a decision of when the FFA would be signed and the 45 day clock started.

On review of the minutes, the EPA requested that the following comments be included:

Although well head treatment is in place for the contaminated wells used by the City of Pasadena, the extent of contamination south and east of the production wells, as well as west of the facility in the direction of La Canada, have not been delineated.

Ground water flow measurements in the area of the JPL facility were presented using MODFLOW. The further utilization of this software will limit the ability to handle contaminant transport questions.

The high concentrations of Dense Non-Aqueous Phase Liquid (DNAPL) detected suggest that there is a possibility of pure product at the base of the aquifer.

No information as to the depth of contamination in ground water was presented. In addition, the vertical and horizontal extent of the contamination must be presented.

The source of contamination was suggested to be the septic systems and not the waste pits themselves. Soil boring information in the waste pit areas need to be compiled and presented in a concise manner. JPL will propose further soil sampling plans in the future.

Historic use and development of the site needs to be more fully investigated and presented to define possible sources and removals that have changed over the years.

Volatile subsurface contamination may move in the gaseous phase from both the vadose zone and the contaminated ground water. Additional testing to define this possible human exposure route should be planned in subsequent rounds of sampling.

Scoping for the human health risk assessment should include the overall site conceptual model and human exposure routes, as was done in the handouts of this meeting, but must also include the exposure factors that will be used and the calculation of Preliminary Remediation Goals (PRGs) based on those complete exposure routes for each media. Data gaps need to be addressed to focus the future sampling efforts.

The meeting was adjourned at approximately 12 noon.

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