Draft Meeting Summary
Northeast Mountain View Advisory Council (NMAC)
November 16, 2005 7:00 - 9:00 P.M.
Slater Elementary School – Multi Purpose Room

I. Call to Order and Administrative Items:

- Call to order at 7:10 P.M.
- Attendees include:

  Jane Horton, NMAC Board Member
  Steve Hochstadt, NMAC Board Member
  Mark Underwood, NMAC Board Member
  Lenny Siegel, NMAC Board Member
  Viola Cooper, EPA Community Involvement Coordinator
  Alana Lee, EPA Project Manager
  John Moody, EPA Project Manager
  David Mickunas, EPA Environmental Response Team
  Rebecca Connell, EPA Environmental Response Team
  Wilson Doctor, Navy
  Don Chuck, NASA
  George Cook, Santa Clara Valley Water District
  Dan Wallace, community member
  James McKay, community member
  Jim McClure, MEW consultant
  Kevin Woodhouse, City of Mountain View
  Tom Trapp, BCCT

- Lenny Siegel asked those in attendance to introduce themselves. Each attendee stated their name and affiliation.
- Approved Agenda for tonight's November 16, 2005 NMAC meeting.
- Meeting Summary from the September 21, 2005 NMAC meeting was not approved. Request that EPA distribute to NMAC Board and interested parties for review.
- Next meeting date not determined. Suggested January or February 2006.
- Election of Board Members – No quorum tonight.

II. Orion Park Housing Area Groundwater Sampling Results (Wilson Doctor, Navy)

Presentation Handout: "Orion Park Housing Area – Groundwater Monitoring Well Installation Update" dated November 16, 2005

- Two types of well heads were installed: risers and flush mounts (Figure 1 on handout).
- Wells were installed July 11 through 22, 2005
- Groundwater sampling at the new wells was conducted August 8 and 9, 2005.
- Second round of sampling is scheduled for week of December 5, 2005.
- The trichloroethene (TCE) results from the August 2005 sampling were presented in the handout, see page "August 2005 TCE Concentrations." The Navy TCE groundwater results and EPA split sampling results were presented. [EPA Note: The

EPA split sample data reported on the Navy's handout is incorrect. A corrected version is available.]

Q1: The EPA TCE results are consistently lower than the Navy results – why? Is it dueto different labs?
A1: The difference may be due to different labs.

Q2: Were the split samples collected on the same day?
A2: Yes.

Q3: Has the Navy ever recorded TCE concentrations as high as 1,200 parts per billion (ppb) in this area?
A3: TCE concentrations as high as 1,100 ppb have been detected.

Q4: What is the next step?
A4: Second round of sampling scheduled week of December 5, 2005.

Q5: Were there any surprises in the results?
A5: The well 8LA area previously had high concentrations of TCE. The August 2005 results are lower than previous results.

Q6 for Alana: Why do the split sample results consistently have a Navy/EPA discrepancy?
A6 by Alana: We looked at the data and the TCE results are within the same range of within 30 to 50 percent (relative percent difference).

Q7: Where is the water table in this area?
A7: The well screens in the upper aquifer (UA) are approximately 8 to 10 feet below ground surface (bgs). The well screens in the lower aquifer (LA) are approximately 50 feet bgs.

Q8: Why are some wells risers and others flush mounted?
A8: Various reasons. For instance high traffic areas are flush mounted.

Q9: Did you see the same Navy higher / EPA lower results relationship with constituents other than TCE?
A9: Generally in the same order of magnitude.
Alana: EPA's results for cis-1,2-DCE and vinyl chloride are similar to the Navy's results.

Q10: Did you find tetrachloroethene (PCE)?
A10 by Alana: No, I do not think so.

Comment by Don Chuck (NASA): Navy is using Upper Aquifer (UA) and Lower Aquifer (LA) terminology. The UA is the upper zone of the A aquifer, and the LA is the lower zone of the A aquifer. Both the UA and the LA are in what has historically been called the A1 and A2 aquifer zones. MEW refers to the A2 aquifer as the B1 aquifer zone.

III. Orion Park Sampling Locations and Results (Alana Lee, EPA)

Presentation Handouts:
1. "NMAC 16 November 2005 – EPA Sampling Locations – Highway 101 and Moffett Blvd Study Area," and
2. "Highway 101 & Moffett Blvd Study Area – Volatile Organic Compounds (VOCs) in Groundwater."

- The objective of the Highway 101 and Moffett Blvd study area groundwater sampling is to determine the extent of the contaminant plume upgradient of Orion Park and identify any potential sources.
- The sampling locations (HP01-HP20) were determined by stepping out from previous locations sampled by others.
- Approximately 81 groundwater samples were taken via Hydropunch. See handout, "Highway 101 & Moffett Blvd Study Area – VOCs in Groundwater."
- TCE and cis-1,2-DCE Results are presented on figure by location (maximum result at each location; ND = not detected).

Q1: Why are some Hydropunch samples reported as "NR" (not reported)?
A1: The portable gas chromatograph/mass spectrometer (HAPSITE GC/MS) sample analysis result was out of range for accurate reporting. Rather than continue to re-analyze the sample in the field using the portable GC/MS, I had a sample sent to the Region 9 laboratory for analysis. The result is reported immediately below the "NR" line. (See handout).

Q2: Do you know if locations with "ND" (not detected) results in the A1 aquifer also had ND results in the A2 aquifer?
A2: The A1 aquifer zone is 0 to 30 feet bgs and the A2 aquifer is 30 to 60 feet bgs. We can look at it. The figure shows all the EPA results for the A1 aquifer zone (0-30 feet bgs). The results for both HP04-15.5 (A1 aquifer) and HP04-53 (A2 aquifer) are ND. The table shows the results for all the locations and depths.

Q3: Why is 30 feet bgs a distinction between aquifers?
A3: There are two different aquifer zones we are targeting: we collected samples in the A1 aquifer zone - 0 to 30 feet bgs and in the A2 aquifer zone - 30 to 60 feet bgs.

- Alana presented two posters of previous groundwater monitoring results in the Orion Park area, Highway 101 and Moffett Blvd Study Area, and the western portion of the MEW regional plume (per comments received at the September 21, 2005 NMAC meeting).

Q4: The posters include data from how far back in time?
A4: We tried to most recent data for the monitoring wells. The Navy's HydroPunch data on Orion Park date back to 2002. These Historical Results Posters are a work in progress and we are updating to make sure we have the most accurate data.

Q5: Do these posters reflect EPA's final HydroPunch locations?
A5: Yes, they reflect the final locations where EPA sampled.

Q6: Can you provide the coordinates for the HydroPunch locations?
A6: Yes, I can provide the coordinate data and cone penetrometer testing (CPT) logs for the EPA sampling locations.

Comments from Lenny Siegel:

1. The results show no PCE levels except at HP15. This location is near the dry cleaner. The results indicate that PCE has not migrated very far from the dry cleaner.
2. There are a couple of spots where there is pronounced degradation, but generally there is not a lot of dichloroethene (1,2-DCE) and vinyl chloride.
3. There are high levels of TCE between the Moffett Vlvd/101 interchange and Steven's Creek. Possibly due to historic facilities such as the PG&E substation, the vector control facility, and (on the other side of the creek) the disposal facility.

Q7: Has there been any sampling west of the site, but still south of Highway 101, and do you have groundwater flow data?
A7: EPA did not collect groundwater samples west of the 750 Moffett Blvd property. Or measure groundwater elevations. The groundwater flow direction on Orion Park is generally to the north with a slight north/northwest or north/northeast direction. The Army and Valley Transportation Authority (VTA) collected some groundwater samples to the west of Stevens Creek. Also, several monitoring wells were located on the former Kaiser Sand and Gravel property where low levels of TCE were found in shallow groundwater.

Q8: Has EPA drawn any conclusions about the source of the contamination?
A8: Not at this time.

IV. Trace Atmospheric Gas Analyzer (TAGA) Sampling (David Mickunas, EPA/ERT)

Presentation Handout: Northeast Mountain View Advisory Council - 16 November 2005

- See pictures and operational schematics in handout.
- Sub-slab soil gas sampling, initial indoor air sampling, and detailed indoor air investigation procedures explained in handout.
- NASA Building N210 sampling and detailed investigation showed a high concentration of TCE isolated in an enclosed pedestal area near a stairway.

Q1: What is the use of Building 210?
A1: Don Chuck (NASA) - Office space and laboratory. Historically it was used as a hangar.

Q2: Is the source of indoor air contamination from groundwater?
A2: It appears to be subsurface contamination.
Comment from Don Chuck (NASA): We are doing more sampling.

Q3: Does the presence of DCE indoors indicate a subsurface source?
A3 by Alana: Yes, 1,2-DCE is not typically found in consumer products so the 1,2-DCE in not an indoor source.

Q4: What is the big spike in concentration at the end of the detailed investigation time/concentration graph (see handout)?
A4: It is a spiked concentration used to test the instrument.

- Initial and detailed investigation of Unit 728B presented in handout.

Q5 to Wilson Doctor (Navy): Has the Navy seen this data from the EPA?
A5 by Wilson: No.

Q5 to Alana: Has EPA come to any conclusions?
A5 from Alana: I will talk about some of our findings and conclusions during my presentation.

Q6: Is this the first time this site has been sampled with TAGA?
A6: Yes.

Q7: The results (chromatograph) presented in the handout are illegible because of the size. Can we get a legible copy of the results?
A7: Yes.

Q8: Did you sample other locations?
A8: Yes. Alana: EPA used the TAGA to sample 22 vacant units at Orion Park and five buildings at NASA.

V. Orion Park Indoor Air Sampling (Alana Lee, EPA)

Recap of EPA Indoor Air Sampling at Orion Park – see handout provided at July 20, 2005 NMAC meeting.

- EPA sampled 26 vacant units in 14 occupied buildings during April/May 2005.
- EPA used the same ventilation protocol the Navy used: first ventilate the residence by opeing all the windows for 24 hours, then close all the windows for 48 hours, and sample over a 24-hour period. Summa canisters were used in the living rooms set at breathing height (approximately 3 to 5 feet above the floor). Sub- slab soil gas samples were collected as grab samples in smaller Summa canisters.
- EPA showed results of indoor air sampling by building and unit. Some elevated TCE levels were seen at adjacent units even in different buildings, such as Unit 714G and Unit 727F.
- Indoor air sample results were compared to outdoor air sample results, and indoor air sample results were compared to sub slab soil gas sample results (no handout).

Q1: Did you calculate the attenuation factor?
A1: Yes, at each location. Generally the attenuation factors ranged between 0.001 to 0.03. Attenuation factor is the ratio of the indoor air concentration to the soil gas concentration.

Comments from Lenny Siegel:
1. There is an EPA model based on the attenuation factor, however EPA is building a database of measured attenuation.
2. In the same building you can have different readings in different units. This means you need to sample every unit.
3. If you have a single slab and multiple units, and there is a crack in one unit only, then that one unit will have a higher contaminant concentration result than modeling indicates.

Q2: hat is the action level for TCE?
A2: For MEW and Moffett Field, EPA Region 9 has established an interim action level for of 1 microgram of TCE per cubic meter of air (ug/m^3). This is based on where the draft provisional TCE range overlap with the California EPA TCE risk range (between 0.96 ug/m^3 and 1.7 ug/m^3).

Comment by Lenny: 1 ug/m^3 is a mitigation trigger, and is not necessarily used as an area-wide remediation trigger.
Comment by Alana: EPA has not yet set a cleanup level for TCE in air. We have not yet selected the final remedy to address the vapor intrusion pathway.

- Units 727F and 714G had elevated levels of TCE exceeding EPA's interim action level. The low 2003 sample results may be biased low because the heating system was turned off during sampling in November 2003.

- Results indicate that for the most part, the EPA did not detect high concentrations in indoor air.
- Soil gas results had a higher number of detections and higher concentrations.
- If there were indoor air TCE detections with the TAGA, then EPA conducted a detailed investigation throughout the unit. The highest hits were in the closets and under the stairs.

Q3: Was there any construction being conducted (e.g., was there penetration through the ground surface?)
A3: Not at these units.

- Indoor air sample results from downstairs and upstairs were compared. TCE definitely migrates upstairs, but the downstairs living room is generally representative of the unit.
- Unit 727F presented a TAGA/Summa canister anomaly. David explained that there may have been a window open during the TAGA sampling. The window was closed for the Summa canister sampling. The Summa sample result concentrations were higher.
- In summary, TAGA is very useful for determination of preferential pathways, particularly in the NASA buildings. In addition, the TAGA enabled EPA to sample many units in a short period of time.

Q4 from Lenny: Based on the results, a percentage of the vacant units have elevated TCE concentrations. Therefore it is likely there are a percentage of residents in non-vacant units

being exposed to TCE. These are military personnel and families that may not want to complain, so we need to complain for them. Were any occupied units sampled?
A4: No, EPA asked several residents to voluntarily have their residences sampled. No residents volunteered.

Q5: Does the soil gas plume correlate with elevated indoor TCE concentrations?
A5: EPA has not evaluated that at this time.
Comment from Don Chuck (NASA): Soil gas contamination does not necessarily correlate with groundwater contamination.
Comment from Lenny: You need some level of groundwater contamination to get soil gas contamination. Some day the EPA should do a report about what they plan to do about the overall site contamination.
Comment from Alana: The Navy has not yet said they would do anything about vapor intrusion or groundwater contamination at this site. EPA thinks the Navy is responsible for conducting the necessary investigation. EPA conducted the expedited air sampling effort at Orion Park in April and May 2005 because at the time many of the residential buildings at Orion Park were to be transferred to a private developer under the Residential Communities Initiative (RCI) program. EPA conducted the air sampling at Orion Park to help with our decision on the appropriate Environmental Conditions of the Property category. Some of the residences were to be retrofitted to include vapor mitigation measures. Shortly after EPA's sampling the RCI deal fell through.

Comment from Lenny: One thing the EPA can do is put institutional controls on these properties to alert owners and potential owner of vapor intrusion, and to state how vapor intrusion can be mitigated.
Comment from Don Chuck: NASA wants the Navy to cleanup the contamination right away.

Q6 from Lenny: My understanding is that the Navy is responsible for the TCE contamination. What is the EPA looking to do now that we have seen some of the groundwater monitoring results from the Navy? What are the obstacles to cleanup? This situation may require enforcement action from the EPA.
A6: EPA's position is that the Navy is responsible for the necessary work. EPA also acknowledges that there is TCE contamination migrating onto Orion Park from upgradient locations.

Q7: What is the big picture / long-term enforcement plans for MEW?
Comment from Lenny: EPA made several recommendations in the Five-Year Review.
A7 by Alana: EPA's Five-Year Review indicated that we need to address the vapor intrusion pathway at the MEW Site. We may need to conduct a focused Feasibility Study to address the pathway. To date we have taken interim actions to reduce elevated levels of TCE in indoor air at one residence and several commercial buildings. There is a remedy in place for groundwater, but the remedy is not adequate for vapor intrusion.

Q8 from Jane: What is the long term plan? Do I need to keep my fan operating indefinitely inside my home? This seems like a short term solution, not long term remediation.
Comment from Lenny: The data is great, but can the EPA present a road map for overall site cleanup at the next meeting?

A8 by Alana: EPA is working on developing a long-term plan to address the vapor intrusion pathway. We also need to develop a long-term monitoring strategy. Cleaning up the extensive groundwater plume is complex. We may be able to target former source areas with alternate technologies to pump and treat. We do not have the final answer at this point in time.

VI. GTE Site Update (John Moody, EPA)

No Handouts.

- The GTE Site update from the September 21, 2005 meeting still stands.
- EPA received the bio-remediation bench test data, but will not comment on that until the pilot study work plan is received. In general the bench test data says the technology will work. The work plan is expected from GTE in December 2005.
- The timeline is to reach out for community input in the spring of 2006 and start the bio-remediation pilot test in the summer of 2006.
- The location of the pilot test is expected to be at the TCE concentration hot spot, on Nicholas Drive.
- The pump and treat will continue to be operated. The monitoring plans will need to be revised to ensure protection of the existing residences.

Q1: New construction was approved in 2004. Has the approved construction been built?
A1 from Mark Underwood: Yes, about 20 units are under construction and some have been sold.

Q2: Are mitigation requirements being met? And are potential buyers being told of the vapor intrusion?
A2: The EPA is not tracking the real estate disclosures, but it appears the potential buyers are being alerted.

Q3: Why do you think that is the case?
A3: City disclosure rules and upfront marketing information.

Q4: Are you getting many questions from the public?
A4: No, not many public questions. When questions are received, the public is referred to the NMAC website. John is surprised at the pointed questions he receives so he believes the public is getting accurate information.

Comment by Mark: Mark will investigate the public marketing by going to see a model unit.

- The EPA requested that GTE pay for the private consultant for the Homeowners Association (HOA).
- The period of performance for the previous HOA consultant is over; they need to start a new one right away.

Q5: Is continuity important?
A5: Yes.

Q6 for Mark: Is the HOA happy with the previous consultant?
A6: Generally yes.

Comment: There is a Moffett Field Restoration Advisory Board (RAB) meeting tomorrow (11/17/05) at 7:00 P.M. at the Mountain View City Hall.

VII. Closing

- The NMAC Board will meet with EPA to discuss meeting frequency. Lenny suggests changing the schedule to conduct meetings only when there are specific reasons such as EPA reports.
- There is no December 2005 meeting scheduled.
- Next meeting may be in January or February 2006
- Request that a review of the GTE bioremediation work plan be put on the agenda for the next meeting.
- Meeting adjourned at 9:10 P.M.