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VB/I-70 Working Group Meeting, July 20, 2000
Meeting Summary

In attendance:
Lorraine Granado, CEASE
Anthony Thomas, CEASE
Mike Maes, CEASE
Sandy Douglas, Cole
Laurel Mattrey, COPEEN
Katie Kolarich, COPEEN
Chuck Patterson, TAG coordinator for Asarco Globe
Student accompanying Chuck (not sure of name)
Celia VanDerLoop, DDEH
Gene Hook, DDEH
Cindy Bosco, DDEH
Barbara O'Grady, CDPHE
Mark Rudolph, CDPHE
Sue Muza, ATSDR
David Mellard, ATSDR
Theresa NeSmith, ATSDR
Rubina Imtiaz, ATSDR
Norys Guerra, ATSDR
Bob Litle, Asarco
Linda Larson, attorney to Asarco
Joyce Tsuji, contracting to Asarco
David Folkes, contracting to Asarco
Bonnie Lavelle, EPA
Ted Fellman, EPA
Michael Wenstrom, EPA
Pat Courtney, EPA
Brenda South, EPA
Marc Herman, EPA
Chris Arend, Congresswoman Degette's office

The meeting agenda is attached to this summary.

EPA began the meeting by stating that CDR Associates will not be providing facilitation services to the Working Group at least for the remainder of this fiscal year. EPA made this decision in order to utilize the available project funds soil sampling.

ATSDR Activities

The Public Health Assessment (PHA) is expected to be released for Working Group

review in late August. The modifications PHA will include a quantitative section (this is not standard for ATSDR health assessments; they are commonly qualitative). The PHA will identify those properties considered by ATSDR to present an "Urgent Public Health Threat" and those considered by ATSDR to present a "Public Health Threat".

ATSDR prepared maps of the Phase IIIa soil sampling results and shared the maps with the working group. The concentration mapped for each property is the average of the three composite samples collected by EPA. ATSDR is using these maps for two purposes, (1) to understand the source of contamination and (2) to determine if EPA has sampled in the right areas. ATSDR's observations:

- No pattern of arsenic concentrations is observed when the full range of measured concentrations are mapped.

- A pattern is suggested when maps are prepared of only arsenic concentrations below 23 ppm and distributed in 3 ranges chosen by ATSDR . There appears to be more homes at the upper end of this range (near 23ppm) in the western portion of the study area.

To further explore the distribution, ATSDR calculated the ratios of the number of residences with average arsenic concentrations in ranges of 12-17, 18- 23, 24-29, and 30-35 to the number of residences with average arsenic in the range 0-11. These ratios were calculated by neighborhood. The ratio is higher in South Globeville, Elyria, and Cole.

The Working Group comments on this work were:

- ATSDR chose to map arsenic concentration ranges within the background range of the area. The maps imply "contamination" when the ranges illustrated may be within the normal variability of background and are likely influenced by sampling and analytical variability.

- A suggestion was made that any future mapping focus on concentration ranges that have some significance to human health risk. It may be better to wait until the PHA and the baseline risk assessment are final to make statements about the health significance of the sampling data.

- Concern was expressed that ATSDR's choice of concentration ranges that were mapped may cause undue alarm in the community.

- Presentation of sampling results in the form of maps is considered to be very useful in understanding the data. The community believes the maps show a greater willingness on the part of ATSDR to share information.

- A request was made that ATSDR discuss its approach to interpreting sampling data (such as the mapping) with the working group before undertaking such work.

- Interpretations of the soil data should take into account sampling density, soil type, and the form of arsenic (using speciation techniques) before making any conclusions about the pattern of contamination.

- It is appropriate for EPA as the regulatory agency to investigate the source of contamination and this work is ongoing in the Pilot Scale Study. It was suggested that for the purpose of assessing human health risks in the PHA and the baseline risk assessment, the "source" within the exposure pathway (source, release, transport, exposure point, and receptor) is the lead and arsenic in yard soils.

- The United States Geological Survey has collected a lot of soil samples along the Front Range along a mile grid pattern. The data shows that the closer you get to Denver, the higher lead levels are observed. Higher lead levels are observed in older parts of the city. The central question in interpreting soil data is, at what level does it become a problem to human health? USGS data indicates that background arsenic levels may be in the 30ppm -40 ppm range.

ATSDR presented their suggested approach to predicting "hot spots" using the Phase III composite soil sampling data. This approach, which relies on data from the intensively sampled homes, is an alternative to the approach described in EPA's Project Plan for the Phase III soil investigation which was developed by the working group in August 1999. In order to consider ATSDR's alternative approach, the working group will need to review it in detail and have a technical discussion. The Phase III program and EPA's risk assessment have been implemented using the approach described in the Phase III project plan, not the new approach now suggested by ATSDR. EPA has identified properties with potential for hot spots using the approach detailed in the Phase III project plan and is currently re-sampling these by collecting 30 individual samples at each. This data will reveal if there are actually "hot spots" as defined in the baseline risk assessment. This data will be provided to the Working Group once it is validated.

ATSDR next described their planned health intervention and health education activities:

Availability Sessions: August 22, 2000, 6pm -9pm
August 23, 2000, 10am -2pm

The purpose of these sessions is to hear community's concerns. ATSDR plans to have a physician at these sessions. Both will be at the Swansea Recreation Center. There may be other sessions at a later date in the Cole neighborhood.

Biological Testing: In Cole and Clayton,
August 21, 2000, 10am -2pm, pick up cup and collect hair
August 22, 2000, 4pm - 7pm, drop off urine samples

In Swansea/Elyria,
August 22, 2000, 6pm -9pm, pick up cup and collect hair
August 23, 2000, 10am -2pm, pick up cup and collect hair
4pm -7pm, drop off urine samples
August 24, 2000, 10am -2pm, drop off urine samples

The population targeted for biological testing by ATSDR is residents living at properties with arsenic soil levels of 100 ppm or greater. Available funding will allow ATSDR to collect biological samples from residents at approximately 30 homes. ATSDR plans to send out letters to the targeted population notifying them of the offer. At the same time, CDPHE intends to conduct blood lead sampling in the area. CDPHE will send out letters separately from ATSDR but the letters need to go out at the same time. As part of its exposure investigation, ATSDR intends to sample indoor dust at the targeted homes with children. This effort will include the collection of vacuum and wipe samples. The samples will be analyzed for arsenic and lead. ATSDR has asked for the assistance of EPA's Emergency Response Team in New Jersey. EPA expressed concern that Region 8 had not been consulted in this sample collection effort and that the dust collection protocols should be comparable to those used by Region 8 in the Phase III program. When asked why it was targeting homes with arsenic levels above 100 ppm when it appears that there is concern about the possibility of exposure due to pica behavior at homes with arsenic concentrations less than 100ppm, ATSDR replied that it is their policy to always do exposure investigations at homes with the highest concentrations because if exposure is not seen at the highest soil levels, it is not likely to be seen at lower concentrations.

As part of their health education efforts, ATSDR is planning to prepare two facts sheets. The first will be on soil pica behavior and the second will be on the health effects of exposure to arsenic.

North Denver Environmental Initiative
(Formerly the North Denver Enforcement Initiative)

Brenda South of EPA reported that she has been coordinating EPA's North Denver Environmental Initiative internally within EPA. Her efforts have been focused on scheduling compliance inspections at regulated facilities. Brenda has also been talking with EPA's potential partners in this effort so that resources can be brought to bear in the most efficient manner. Both the State of Colorado and the City and County of Denver have agreed to participate and share the work as appropriate.

The effort is anticipated to broadened beyond inspections and enforcement and will include both multi-program and multi-media efforts. The State of Colorado is especially interested in focusing on Pollution Prevention as a community-wide effort. The effort is now viewed as a two year process, rather than a one year effort.

EPA's Draft Baseline Human Health Risk Assessment

EPA distributed the draft Baseline Human Health Risk Assessment and the final Relative Bioavailability of Arsenic in Soils form the VBI70 Site for review and requested written comments by August 24, 2000. EPA directed the attention of the working group to the following sections of the Baseline Human Health Risk Assessment document:

- The document includes a screening level evaluation of health risks to workers
- The document includes a screening level evaluation of health risks associated with the inhalation of dust resuspended from yard soils.
- The evaluation of human health risks associated with exposure to arsenic in soils is in a separate section from the evaluation of the human health risks associated with exposure to lead in soils.
- The cancer risk associated with direct exposure to soils containing arsenic was summarized in two parts, the average or "central tendency" exposure and the "reasonable maximum exposure". The results of the cancer risk assessment were presented in terms of the number of properties at various risk levels as follows:

AVERAGE OR CENTRAL TENDENCY EXPOSURE	
RISK LEVEL	NUMBER OF PROPERTIES
greater than 10^{-4}	0
less than 10^{-4}, greater than 10^{-5}	124
less than 10^{-5}	1424

REASONABLE MAXIMUM EXPOSURE	
RISK LEVEL	NUMBER OF PROPERTIES
greater than 10^{-4}	112
less than 10^{-4}, greater than 10^{-5}	995
less than 10^{-5}	441

- The non-cancer risks from short term exposure were described next. Both sub-chronic (exposure of 120 days) and sub-acute (one day out of two) exposures were quantified in the risk assessment. The results of the composite soil samples from each yard were used to predict a "hot spot" in accordance with the methodology detailed in the Phase III Project Plan. The dose from short tem exposure to the predicted "hot spot" was compared to an acceptable dose. The ratio of dose to acceptable dose is called the "hazard quotient" or HQ. Yards with predicted HQs greater than 1.0 could be of potential concern. The results are as follows:

SUB-CHRONIC AND SUB-ACUTE NON-CANCER RISKS		
	# PROPERTIES CONSIDERING SUB-ACUTE RISK	# PROPERTIES CONSIDERING SUB-CHRONIC RISK
HQ greater than 1.0 (possible hot spot)	161	166
HQ greater than 1.0 AND cancer risk less than 10^{-4}	49	54

- In order to provide more information about whether a predicted hot spot is of actual concern, EPA is re-sampling 54 properties by collecting 30 individual soil samples at each. Short term exposure will be re-evaluated using this new data.

- The risks associated with eating vegetables grown in a home garden were evaluated using the arsenic levels measured in vegetables collected from 19 homes in the study area. For the reasonable maximum exposure, risks were greater than 10^{-4}at five properties.

- Lead risks were evaluated using the Integrated Exposure/Uptake Biokinetic Model to predict blood lead levels. The model predicted that at yards with mean lead soil

levels greater than 400ppm, there is a greater than 5% chance of blood lead levels being greater than 10 ug/dL, and thus are of potential concern for long term exposure. The number of properties with soil lead levels greater than 400 ppm is 159. Less than 30 of these properties were also identified as of potential concern due to arsenic risks.

- To assist the working group in reviewing the document, EPA will provide a CD with Phase IIIA data and the calculated "hot spot" value for each property. Also, EPA will provide a Data Quality Assessment Report.

EPA requested written comments on the Baseline Human Health Risk Assessment by August 24, 2000. There will be an opportunity for the general public to provide written comments during the public comment period for the Proposed Plan, currently scheduled for November - December, 2000 timeframe.. EPA suggested that the working group identify a few dates for meetings to discuss comments during the review period. August 8, 2000 from noon - 3pm and August 14, 2000 from 2-4:30 pm were agreed upon. Both meetings will be at the offices of ISSI, 14th floor, south tower of EPA's building.

Community Issues

- Inhalation of dust as an exposure pathway was raised as a community concern. In response, EPA indicated that the screening level evaluation done in the draft Baseline Risk Assessment indicates that the risks associated with inhalation of dust from soil is a small fraction of the risk associated with ingestion of soil. The complete description of this evaluation is included in the risk assessment. EPA is seeking comments on the evaluation.

- Coordination among agencies. In the course of various discussions, it was apparent that not all agencies are coordinating effectively and that some are following very different processes. Lorraine Granado indicated that she views the missions of ATSDR and EPA as different, and therefore there processes may differ. ATSDR addresses health concerns, EPA addresses environmental concerns. Bonnie Lavelle reiterated that EPA takes action or requires that others take action based on protection of human health and the environment and that we had discussed this multiple times. Both Celia VanDerLoop and Barbara O'Grady responded that EPA's cleanup decisions are based on health risks. There was also discussion about the uncertainty of ATSDR's process. EPA stated that there is uncertainty in both EPA's and ATSDR's risk assessment processes. David Mellard indicated that he is willing to meet to discuss quantitative aspects of PHA, but that he wants all the risk assessors at that meeting.

- Confidentiality of sampling results. Celia VanDerLoop expressed her frustration with not having sampling data to check others' work. She also indicated that she feels there is a public right to the information and she is unwilling to sign a confidentiality agreement.

She will send a Freedom of Information Act (FOIA) request to EPA soon requesting the data. EPA described its concerns with privacy, especially with regard to Realtors using this information without the knowledge of owners and without the knowledge of what various concentration levels mean. EPA is also concerned that releasing the sampling data along with specific addresses may cause property owners who have been reluctant to have their yards sampled to refuse further attempts to sample. Property owners have not been informed that their results would be public. Some owners have allowed sampling only after being assured that the results would be private. On the other side of the issue was the concern that renters and prospective purchasers are assured access to the information. EPA has been routinely providing information about whether a property has been sampled or not to anyone who asks. It is EPA's practice to refer requests for the sampling results directly to the property owner. In this way, the property owner makes the decision about releasing the specific sampling results. EPA provides the name and telephone number of the property owner to the person requesting the information. EPA made it clear that if sampling results are released without a confidentiality agreement, then they will be considered public and will have to be available to anyone who requests the information. It was suggested that EPA check to determine how privacy issues are managed at other residential sites. The rest of the Working Group was encouraged to transmit their concerns on this issue formally to EPA so that EPA can consider all the views before making a decision about a possible public release of sampling results.

Status of EPA's Time Critical Removal Action

EPA received funding for the removal action (removal and replacement of yard soil) at 23 homes in the study area. The On-Scene-Coordinator, Pete Stevenson, will begin to visit with property owners in August and hopes to begin construction work in September. EPA hopes to complete the work this fall and may do some follow-up landscape work next spring. Because of the delay in the start of the action, EPA extended the offer of testing arsenic levels in hair and urine and lead levels in blood to the residents at the 23 removal homes.

EPA Update on Operable Unit 2

EPA (enforcement section) plans to issue "notice letters" to potentially responsible parties (PRPs) soon. These letters let the PRPs know that EPA believes they have some liability for the operable unit.

EPA has organized the on-smelter facility work into two separate operable units because they have not been able to identify PRPs for the Argo Smelter so EPA anticipates taking the lead on the work at Argo. Therefore, EPA now refers to the work at the Omaha Grant Smelter Facility as Operable Unit 2 (anticipated PRP lead) and the work at the Argo Smelter Facility as Operable Unit 3 (EPA lead).

Notice letters will be public documents and when they are issued, the PRPS will be

identified. The notice letters invite the PRPs to enter into an agreement to conduct work. Once PRPs receive the notice letter, they have a certain time frame for responding to EPA's request.

EPA anticipates that the work on OU-3 will lag behind work on OU-2 by 3 months or so. All draft work plans will be made available for working group review and input, even those prepared by the PRPs. EPA intends to ensure that the working group continue to have input into the work on the smelter facilities.

Community Involvement Plan

EPA asked for comments on draft CIP. None were available. New deadline for comments is next Working Group meeting, August 17.