**VB/I-70 Superfund Community Advisory Group (CAG) Meeting Notes**

**Date of Meeting:** Tuesday, March 13, 2018

**CAG Members Present:** Kim Morse, Lloyd Burton, Bridget Walsh, AE, Steven Eppler, Tad Bowman

**Ex-officio present:** Celia VanDerLoop, Jack Paterson, Kerra Jones, Andrew Ross, Jesse Aviles, Jennifer Chergo, Fonda Apostolopoulos

**Facilitator:** Elizabeth Suárez

**Introduction:** Ms. Suárez invited everyone at the table to introduce themselves with their affiliations. Each CAG member received the monthly folder with printed materials. Ms. Suárez briefly reviewed the agenda for the night’s meeting.

Ms. Morse requested that ten minutes be blocked out in each month’s agenda for miscellaneous presenters or topics of interest. No quorum was present to vote on this motion.

**Construction Scorecard Update:** (Mr. Ross)

The scorecard discussed at this meeting covered the January 2018 time period. No additional solid waste or asbestos containing soils were removed during the month of January. Ongoing water treatment continues, totaling to almost 27 million gallons of water as of January 31st. Three of the air monitoring stations at GLO detected PM10 exceedances on January 8, which was the result of regionally poor air quality. There were no air quality exceedances of lead or arsenic. Denver has submitted a report regarding the January 8th exceedance to Mr. Aviles at the EPA; this report will be added to Denver’s webpage. Mr. Burton asked if, in addition to the regionally poor air quality on January 8, there might also be local contributions from heavy equipment operations conducted at the GLO site. Mr. Ross replied that he had consulted Denver Public Works project manager Mr. Ryan Crum, who noted that on January 8th the construction crews at GLO only performed light-duty construction activities; little or no heavy machinery was utilized.

**Response to Previous CAG Questions:** (Ms. VanDerLoop)

A number of CAG members previously asked questions regarding the liner testing protocols and liner warranty. Ms. VanDerLoop presented an aerial view map that showed the planned location of the liner, Delgany Interceptor, culvert, outfall, and riprap features in the GLO site. She explained that the liner is tested for a number of material properties; these include thickness, tensile strength, resistance to tear/puncture, amongst others, as detailed in the Final Design Report (on Denver website). The liner will be delivered onsite in rolls and then seamed together (two seams for each join creating a channel). During testing air pressure is introduced to the channel between each pair of seams to test the integrity of each seam. Additional seams will be created in the liner to work around punctures around pipes and punctures for attachment to the anchor walls; vacuum pressure via a vacuum box will be introduced to ensure an air-tight seal in these areas. Also, destructive testing will be performed; inspectors cut out a section of the liner, then test that section for shear strength and peel strength. There are many national standards that guide this testing which Denver will follow, which are spelled out in the Final Design Report. Placement of the soil above is the most likely source of damaging the liner at this stage of installation, as heavier low ground pressure equipment will be utilized to move the soil on top. ASTM (American Standard for Testing Materials) standard 7007 governs electrical leak location survey testing.
As a part of ELLS, holes will be intentionally created in a section of liner material, then electrical leak testing will be performed to ensure that the testing detects the holes and functions correctly. All of these details are available in the Final Design Report available on Denver’s website. The liner warranty covering the material lasts for 20 years and the installation warranty lasts for 2 years. Denver expects the liner to last 50 to 100 years, probably longer. In response to questions previously asked regarding the permeability, the liner will be practically impermeable, more so than concrete or wood. Denver is in the process of drafting the O&M plan, which will cover inspection and maintenance of the channel, soil surface, and liner walls to which the liner is bolted. Regular vegetation surveys will be conducted to prevent the growth of deep rooted vegetation. There is also a significant staff training component, and compliance with the Land Use Control Implementation Plan (LUCIP). The LUCIP is an agreement between Denver and CDPHE which mandates practices to ensure land use controls are followed, such as notification prior to digging in the channel area. Ms. Morse asked for clarification regarding the frequency of electrical leak testing. Ms. VanDerLoop replied that the initial electrical leak detection survey will occur after the initial two feet of soil are placed above the liner. After that, visible settlement in the liner area or other notable issues will trigger additional surveys. Ms. Morse requested that periodic surveys should be performed at defined intervals. She also asked how the liner testing would be performed without any modifications to the system. Mr. Aviles replied that the current design for the liner makes no indication that it will require system modification. Ms. Morse also asked for clarification as to why the liner is required in this area only but not for the rest of the Superfund site. Ms. VanDerLoop explained that there has been no selected remedy for the overall site (OU2) yet. For GLO, Denver wanted to move quickly, and preemptively implemented a liner design to prevent potential long delays in review and documentation required by the EPA. Also, Denver is directing stormwater through a concentrated area at GLO, so a highly protective design was chosen. In response to a question, Mr. Ross clarified that the 39th avenue design does not include a liner. Extensive soil sampling in the 39th Avenue has not indicated the same levels of contamination as OU2. The areas of contamination encountered will be excavated and removed. Mr. Burton asked if there is a substantial material failure during the 20 year period, will the manufacturing company bear the full financial burden of the liner replacement. Furthermore, does this company have a bond against the possibility that the company declares bankruptcy and is not able to bear the replacement cost. Ms. VanDerLoop replied that the City would ensure repairs as needed, and would likely pursue cost recovery in the event of material failure, but she does not know the details of whether a bond was required. Mr. Eppler asked for the expected release date of the O&M plan as a final document to the public. Ms. VanDerLoop replied that a draft will likely be ready to be submitted to EPA in late April. At that time, it will be a public document. Community members can submit comments or recommendations to EPA on changes they would like to see at that time. In response to a question from AE, she also clarified that the lead agency for the O&M plan is DDPHE, and that DDPHE has a full-time trainer that works with many other city agencies, and who will conduct the training detailed in the O&M plan.

**Sampling Methodology Presentation** (Mr. Aviles, EPA)

Mr. Aviles introduced himself in Spanish as a native Spanish speaker and invited other Spanish speakers to contact him anytime with questions. In response to questions at previous meetings about sampling, Mr. Aviles delivered this short presentation to cover sampling fundamentals.

Environmental professionals sample to answer a question. Sampling is often driven by law, for example in real estate transactions. The ASTM standard, phase I is the most common required for environmental site assessments in such transactions. Also sampling facilitates scientific research, such as identification of the principal soil types found in Puerto Rico. In general, the media of interest guide the material to be sampled. There are two primary methods to sampling, using field equipment to sample in the field and
using laboratory equipment to evaluate a sample that is collected and transported to a lab. Sampling is not conducted at random, but guided in a determined way to best answer the questions of interest. The sampling must be representative of the larger area and demonstrate compliance with applicable regulations. He presented a hypothetical scenario to demonstrate an environmental investigation with sampling: a suspected tank release that has occurred at a gas station. The consultant is tasked with confirming the release of gasoline and determining the path of the gasoline in the subsurface. The first step is to create a Conceptual Site Model, which consolidates known conditions of the site (gas station) and surround area, including geographic features like the nearby river, elevation contours, water table contours, and bedrock geology. Next, the scientist must determine which media should be sampled. Groundwater, soil (at depth), and indoor air are all media of interest in this scenario. Sampling will start in closest proximity to the point of release then move farther away. Financial constraints will inevitably limit the number of samples collected. The goal is to best characterize the release at the site. In general, a field log always accompanies the field sampling to provide as much information through observations as possible. Defining the extent of the contaminant is an important goal, and areas indicated to be outside of the extent of contamination do not require sampling. Mr. Dutcher asked how do you know when you have sufficient data to define these parameters. Also, he pointed out that there is the vertical dimension – depth to consider. Mr. Apostolopoulos commented that all of these environmental projects are like puzzles, problems to be solved. Judgements must be made with incomplete information. Techniques are employed to maximize information collected; for example a photoionization detector (PID) evaluates the soil borings at varying depths from the groundwater well borings. Often, the first step in a leaking underground storage tank project is to identify and remove the source of contamination, followed by further sampling. The more data you get, the more definitive you get. Mr. Dutcher expressed concern for the complexity of environmental sampling and media, as there are a great number of possible contaminants of interest as compared to geotechnical investigations for building foundations. Mr. Dutcher shared his concerns for the thoroughness of the sampling and investigations in OU1. Mr. Aviles replied that in this case, sampling was defined by Superfund law. Preliminary EPA investigations, which sampled for a broad range of possible contaminants, identified two contaminants – arsenic and lead – as the contaminants of concern (COC), so these are the only two contaminants that the EPA is permitted to investigate throughout the future of the site. Mr. Eppler asked about sampling that has been conducted in the areas outside of the liner. A community member criticized the example scenario that Mr. Aviles presented as idealized and not applicable to the complexity of OU2. Mr. Eppler commented that the history of OU2 included multiple sources of pollution and extensive human modification of the site geology. In response to a comment, Mr. Aviles clarified that Superfund does not stop development, it only ensures the public safety within site boundaries. AE called for a clear presentation of the sampling conducted to date and other known physical parameters of the site. The CAG discussion should then follow the presentation of these investigations. Mr. Aviles stated that EPA can direct Denver to collect samples in order to best ensure protection of the public health on the site. Mr. Burton recalled the historical origins of the site initiated with ASARCO. Mr. Burton called for an open mind to the possibility of other harmful contaminants in addition to arsenic and lead that may warrant additional remediation. He pointed out the issue of benzene gas in indoor air quality at the nearby Garden Place Elementary school. Mr. Aviles acknowledged the point about other possible contaminants and said that the update of the RI will address these possibilities. Ms. VanDerLoop clarified that Garden Place is on the other side of the river (a significant barrier to contaminant migration); there must be some connection to the site in question to assign responsibility. Waste materials (at OU2) have been thoroughly characterized and are relatively innocuous. The State of Colorado filed a Natural Resources Damage lawsuit against ASARCO in 1981, which initiated investigations of metals contamination in soils related to historical smelter activities from the ASARCO Globe smelter. That effort led to concerns regarding metals contamination in areas at
a distance away from the ASARCO Globe plant, which investigation resulted in OU1 of the VB/I-70 site. EPA, along with CDPHE, conducted a very extensive evaluation and cleanup of residential soils in OU1. This process is now complete.

A discussion ensued to determine the best new monthly date (same time) for future CAG meetings. Mr. Aviles is no longer able to attend the meetings on the second Tuesday of each month. Ms. Jones will send out an email poll to everyone on the CAG to facilitate the selection of a new date that works best for all attendees.

Ms. Suárez reviewed the guidelines for community members’ commenting period and the guidelines for new membership into the CAG, as discussed in the bylaws. New membership requires a statement from the interested candidate and vote to bring them into the CAG. Mr. Burton noted that there are several members of the CAG and ex-officio that have not attended meetings for several months in succession, which has undermined the quorum; these people should be removed from the CAG which will then lower the required quorum (seven members presently). Mr. Burton agreed to review the CAG guidelines for direction on removal of non-attending members and propose language if necessary. In response to earlier remarks, Mr. Apostolopoulos explained that there has been extensive testing, not only in the OU2 area soils but also in the S Platte River. This section of river is the most sampled section of the river by far. The concentrations in the river both upstream and downstream of the site provide an excellent indication of what is leaving the site, and downstream levels are lower than upstream levels. AE expressed her support for new membership to the CAG, and supported new lines of communication to attract new members from the community. EPA has advertised the CAG during the last two months in La Voz, but has not received many responses. Ms. Morse suggested that the EPA CAG advertising include more explanation as to the mission of the CAG and the Superfund process to better attract participation from the community members. Mr. Burton then introduced three local community members interested in joining the CAG -- Sandra Luis, Jorge Merida, and Armando Payan.

Ms. Suarez queried the group regarding topics for the next meeting and reminded the group that Ms. Morse had called for ten minutes to be reserved every meeting for various topics such as new membership. She clarified that the group will be meeting on a different date next month. AE commented that there is an understandable tension with the forthcoming O&M plan. AE asked if Ms. VanDerLoop could provide any additional details for the O&M requirements. Ms. VanDerLoop explained that it’s uncertain if she will be ready to present on these details in mid-April. Community members expressed their desire to receive these updates as soon as possible, before plan implementation. Ms. VanDerLoop replied that Denver is clarifying documentation and practices for employees that work in the vicinity of the liner. Also, she is consulting with Mr. Ron Frobel to determine thresholds that will indicate concerns. Dori Tilko is DDPHE’s agency trainer; she is currently conducting trainings across City agencies and will likely conduct future trainings for the O&M plan. While Ms. Tilko could be invited to discuss the training program, Ms. VanDerLoop is unsure that is what the group would like to spend time on. The group did not express interest in inviting Ms. Tilko. The GLO project is scheduled to be complete in June, and Ms. VanDerLoop stated that the target is to have a draft O&M plan to EPA by late April, so it will be available to the CAG at that time. DDPHE’s contractor Stantec is currently working on compiling information for the Remedial Investigation, but Ms. VanDerLoop is uncertain of the estimated date of completion.

**Topics for the April Meeting:**

Discussion of the updated RI/FS for OU2 including an update of work completed to date
Expansion of CAG through new membership

Discussion of the O&M Plan

**Open Community Discussion:**

A member of the public shared his opinion that the benzene gas detected at Garden Place Elementary is likely related to benzene migrating from the OU2 site. He requested that future presentations relate more specifically to the OU2 site.

Ms. Hernandez introduced herself as a long-time resident of Swansea, Elyria and Globeville. She expressed concerns for exposure to contamination in this area because of all the soil disturbing construction activities. The (OU1) Superfund cleanup only addressed the top layers of soil. She attributed the illnesses of local friends and family to environmental contamination of the area.

Sandra Luis introduced herself as a mother from Swansea, who is very worried about the environmental contamination in the neighborhood. She asked what kind of information is available to the Spanish speaking community and what kind of signs will help notify people of any possible environmental hazards. She asked where were the historical smelters were located; no information has been circulated. Ms. Suárez replied that all presentations from the meetings as well as reports are available in Spanish and English on the Denver website.

Mr. Payan commented that the government staff are probably doing the best job that they can, but that they must add in truth and responsibility. He added that Robert’s Rules of Order specify that the repeated lack of quorum mandates an appointed committee to designate new members. He also shared concerns for the health of the community’s children. He stated his intention to join the CAG.

Ms. O’Conner commented that community members have a broader scope perspective than the scientists that are working on the project. She believes that the GLO project has been initiated with inadequate environmental investigations.

Mr. Norris expressed his concerns for the possible contaminants left in place in OU2, in the area of the historical urban fill. In his opinion, inadequate sampling was conducted to characterize the total dissolved solids, VOCs, PAHs, and other contaminants in the area. He believes that the leachate leaving this area is moving north, parallel to river, rather than entering the S Platte river adjacent to the site.

Mr. Kheim, Director of Forney Museum of Transportation, stated that he had just found out that the Museum property is on a Superfund site and expressed his frustration. He believes that the Museum was denied a loan as result of its location within OU2. He asked if the City of Denver is under no obligation to notify landowners that they are within a Superfund site. He stated his belief that he has observed inadequate safety protection measures associated with soil disturbing activities on the Museum property and on nearby properties.