

OU #12-013

**Phoenix-Goodyear Airport (PGA) Area/Western Avenue (WA) Plume
Community Advisory Group (CAG) Meeting**

**Thursday, February 9, 2012 at 6:00 p.m. to 8:30 p.m.
Goodyear City Hall, Room 117
190 N. Litchfield Rd., Goodyear, AZ 85338**

FINAL MINUTES

CAG Members in Attendance:

Diane Krone-Co-chair
Lisa Amos
Jeff Raible
David Ellis
Michael Barbetta
Susan Kagan

ADEQ Staff in Attendance:

Tina LePage, Remedial Projects Section Manager
Jennifer Thies, Remedial Projects Unit Manager
Delfina Olivarez, Western Avenue Project Manager
Joellen Meitl, Hydrologist
Travis Barnum, Project Manager
Nicole Coronado, Project Manager
Felicia Calderon, Community Involvement Coordinator (CIC)

EPA Staff in Attendance:

Catherine Brown, Remedial Projects Manager
Viola Cooper, CIC

Others in Attendance:

Nadine Johnson, Environmental Community Outreach (ECO) Association; Wayne Janis, Avondale Public Works; Joe Husband, Phoenix-Goodyear Airport; Don Schafer; Nancy Schafer; Julie Riemanschneider, COP; Ivy Green, ECO Intern; Perla Islas; Jeff Littell, Brown and Caldwell; Jerry Postema, City of Goodyear Public Works; Harry Brenton, Matrix New World Engineering; Stephanie Lyn Koehne, AMEC Geomatrix Inc; Keith Woodburn, TRC; Dennis Maslonkowsky, TRC; Jeff Sussman, Goodyear Tire & Rubber Company; Jim Creedon, Crane Company for City of Litchfield Park; Wally Campbell, City of Goodyear; Tom Suriano, Clear Creek Association; Nancy Nesky, ITSI EPA consultant; Zoe McCraw, Matrix New World Engineering; Michele Rogers, Matrix New World Engineering; Emily Corkery, AMEC; David Madrid, Arizona Republic; Sandra Rode, City of Goodyear; Sarah Ortiz; Diego Vasquez; Pat Hunnuan; Randy McElroy, ECO/TA; Jim Smith, BRG; Leanne Austrins, CH2M Hill; Karl Havlicek; Mary Moore; Barbara Hegarty; Earl Smith; Tim Birdsall; Paula Medina; Kathy Hunter; Pamela Bir and Laurie Pretzman.

1. Call to Order / Introductions – Diane Krone, CAG Co-chair

Ms. Krone, CAG Co-chair, facilitated the meeting.

2. Acceptance and/or changes to minutes of August 4, 2011 and November 3, 2011 - Ms. Krone, CAG Co-chair

Ms. Krone made a motion to accept the August and November minutes. Mr. Raible moved to accept the meeting minutes from the prior two meetings (August & November). Ms. Kagan seconded the motion. Ms. Krone asked if there were any errors or corrections that need to be done on either one of the minutes. Ms. Krone stated that there was no doubt that there were technical problems on the August 4 minutes. Ms. Krone stated that the August 4 revision request of the CAG was handled very much in an unprofessional way and that Ms. Thies gave instructions that the CAG was not to talk to anyone else and only get information from ADEQ. Ms. Krone indicated she found that very upsetting to come into a group and then be threatened. Ms. Krone indicated that she felt that there were two very, important things that came out that had always been glossed over and the two very important things that she wanted to make sure were in the minutes. Then Ms. Krone indicated that what followed was a “watergateness” that she found very distressing. Ms. Krone indicated that neither one of them (original and/or the revised minutes), because the taping was so poor, is really going to tell us what happened at the meeting, which is unfortunate. Ms. Krone went on to say that there needed to be two corrections for the August minutes with regard to attendance: Mr. Jeff Sussman and Ms. Julie Riemenschneider were not in attendance at the August meeting. It was later determined that night that Ms. Riemenschneider was in attendance; therefore Ms. Calderon agreed to remove only Mr. Sussman from the August 4 minutes. Mr. Raible stated that it was interesting reading the August reflections upon the discussion, and he appreciated the efforts to put everything together and believed what was captured on tape was reflected. Mr. Raible asked to receive future minutes in a more timely manner to keep the meeting actions fresh during their review. Mr. Ellis asked to have the following introductory paragraph inserted into the two versions (Version 1 and Version 2) of the August 4 minutes to ensure historical understanding of why there are two sets of minutes: **Due to the absence of the complete audio for this meeting, (as determined by the CAG) the original set (Version 1) of minutes for this August 4, 2011 meeting were found lacking by some committee members. To help correct that after the fact, we’ve created what we can reasonably construct from transcripts of the discussions of the meeting (Version 2). That is the reason why there are two versions of meeting minutes for August 4, 2011 and both versions were accepted in their totality.** Mr. Raible recalled his original motion and motioned to accept the minutes for the August meeting augmented by the preamble that was discussed before as well as the update regarding who was present and to accept the November minutes with no changes required. Ms. Kagan seconded Mr. Raible’s motion. The August and November minutes were passed unanimously by the CAG.

3. CAG business to include: CAG membership, technical breakdown meeting and discussion of Community Involvement activities -Diane Krone, CAG Co-chair

Ms. Krone asked for Mr. Birdsall to introduce himself to the CAG. After Mr. Birdsall spoke Ms. Krone moved onto elections of new CAG members: regarding the first candidate, Mr. Smith, Ms. Kagan motioned to accept Mr. Smith as a new CAG member and Ms. Amos seconded the vote, a unanimous vote to accept Mr. Smith was conducted. Regarding the second candidate, Mr. Birdsall, Ms. Kagan motioned to accept Mr. Birdsall as a CAG member and Mr. Barbetta seconded the vote, a unanimous vote to accept Mr. Birdsall as a new member was conducted. Regarding the last candidate, Mr. Havlecek, Mr. Raible made a motion to accept Mr. Havlecek as a CAG member and Ms. Kagan seconded. Further discussions ensued among the CAG.

Mr. Raible asked if the committee can select the candidate as an alternate. Ms. Amos moved that the group consider Mr. Havlecek as an alternate. Ms. Krone made a motion to accept Mr. Havlecek as an alternate and Mr. Ellis seconded. Mr. Havlecek was voted onto the CAG as an alternate by the group.

Ms. Krone indicated the end of CAG business with the exception of a final vote on whether the CAG members wanted a technical meeting or not. Ms. Calderon stated that questions already received as part of the process to determine the necessity of the meeting had been responded to and that Mr. Travis Barnum, ADEQ Project Manager for PGA-North and South, would be discussing them in his presentation. Ms. Johnson commented that the technical advisor Mr. McElroy from Environmental Community Outreach Association (ECO) could help facilitate answering questions. Ms. Calderon said she could send questions to the Technical Advisory Group (TAG) and ECO as well. Mr. Ellis inquired as to who would be chairing the meetings and Ms. Calderon stated that based off of the majority of responses she had received the Agencies (ADEQ and EPA) were the preferred CAG choice. Mr. Raible suggested that a motion for the creation of a technical meeting that will address the issues that have been documented and subjected to a final review if those items are still outstanding questions be made. Mr. Raible motioned to have the technical meeting with the requirements as he previously stated and Ms. Amos seconded it. Mr. Raible suggested that it might be beneficial to have technical meetings and tours either quarterly, annually or semi-annually integrated with our quarterly meetings. Ms. Amos stated that she thought it would be a benefit to the CAG in seeing the progress of the work and to help generate questions for future meetings. Mr. Barbetta said he would like to have the technical meetings, not because of the carbon issues he asked about previously, since he feels they are being address. Mr. Barbetta indicated he wanted to propose or add new types of technology to be explored for the Site. Mr. Barbetta also indicated an interest in learning more about zero valent iron. Ms. Kagan thought site tours over specific areas of the Site; specifically the airfield would be beneficial.

After the discussion, Mr. Raible amended his motion to suggest that a technical meeting be planned to bring forward a list of technical issues, feedback issues and then focus on those issues outside of the regular CAG meeting on an annual basis. Ms. Krone made the motion. Ms. Amos seconded the motion. There was a unanimous approval vote. Ms. Krone then suggested that Ms. Calderon re-poll the board for areas of interest and questions. Ms. Krone also indicated that she would definitely like to see the EPA be a participant in the meetings and that Ms. Austrins present. Ms. Krone stated that Ms. Austrins knows how to edit and present condensed information for clearer understanding. Ms. Krone stated that it would be best for Ms. Calderon to get the board feedback on this technical meeting via email due to meeting time constraints. Mr. Ellis then asked for an outline on what the Agencies think ought to be in a presentation, so the CAG could give feedback to the Agencies. Ms. Krone indicated that a lot of that type of discussion could be done electronically. Mr. Ellis indicated he would be primarily interested in the Agencies assessment on how this project is going. Mr. Ellis wanted to have the Agencies give a grade how things are going and how the CAG is functioning. Mr. Ellis stated he would also be interested in hearing from the Agencies as to what the CAG could be providing that they aren't now in terms of help, assistance, support or whatever else they might need.

4. Technical Assistance Grant (TAG) Report- Randy McElroy and Nadine Johnson, Environmental Community Outreach Association (ECO)

Mr. McElroy introduced himself and the new intern from Gateway Community College, Ms. Ivy Green. Mr. McElroy stated that Ms. Green will be covering the new social media aspect of the new delivery format (blogging, Facebook, etc.). Mr. McElroy thanked all those involved in getting himself and Ms. Green on the sites for tours and for their participation in potential sampling technologies that might take place in the future.

Mr. McElroy also stated that ECO has been invited to attend the Pebble Creek Homeowner's meeting and that ECO has been staying in contact with AMEC with regard to this issue as they are a community based organization and ECO is looking to serve communities in this way with their grant. Mr. McElroy stated that the handouts and the PowerPoint presentation for the site were still being developed.

Mr. Raible asked if the PowerPoint would be ready for review by the next meeting in May. Mr. McElroy stated that they definitely should be. Mr. Raible asked if there was a way to expedite the process as he was very interested in seeing them. Mr. McElroy said that the TAG plans on sending it to the CAG, EPA and ADEQ before the next CAG meeting so that they can respond to questions or concerns. Ms. Johnson reported that they were just filling in data gaps that they were waiting to get. Ms. Johnson informed the CAG that ECO was just recently added onto the weekly site status update reports distribution lists which will help fill the data gaps she just mentioned. She indicated that once the gaps were filled she thought it would be no later than the end of February for distribution. Mr. Raible stated that he felt the group's focus has turned a corner and the focus of the CAG business was now outward toward the community in terms of informing them on what's going on and that the updated PowerPoint would be an instrument in helping the CAG with that focus. Mr. Raible then asked if the TAG had a master plan on how to communicate with a broader range of communities. Mr. McElroy stated that they are actively targeting community advisories or community outreach groups because, historically, those have been the only community gathering other than EPA's open houses. Mr. McElroy also said that the TAG is also working with media outlets like the West Valley Magazine, the Southwest Chamber of Commerce for written articles as well as a mailing list to target homeowner's groups, clubs, high schools and college programs relative to the issues at the sites. Mr. McElroy also indicated that they are trying to provide positive attributes of the sites, such as the 40% savings to the Catholic church due to the 540,000 gallons of free water they use for the cooling system from PGA-North and the brand new irrigation system provided to the park by the Roosevelt Irrigation District (RID) that will be used to water the baseball fields.

Ms. Amos asked Mr. McElroy and Ms. Johnson if they were interested in receiving input from the CAG and how they would like to receive it. Ms. Johnson responded that an email to either one of them would do and that they will review the ideas and determine if it is duplicative or if their funding would cover it. Ms. Johnson also indicated that they would gladly provide information or presentations upon request.

5. Update of PGA-South activities- Jeff Sussman, Consultant for Goodyear Tire & Rubber Company

Mr. Sussman gave a PGA-South update that included: plume locations; update status of ongoing cleanup; review current activities and upcoming activities.

See slide presentation below

Mr. Raible asked how the Trichloroethylene (TCE) that has been removed is measured. Mr. Sussman responded that nothing comes out of the treatment system per the injection well monitoring, so it is a mass calculation. Mr. Sussman added that they know a volume, a concentration, and you can calculate the mass. Mr. Sussman indicated that the current influent concentration at the Subunit A treatment facility is 30 parts per billion (ppb). Mr. Sussman continued with a more detailed explanation and Mr. Raible said that the discussion was perhaps more suited to the upcoming technical meeting. Mr. Birdsall, asked Mr. Sussman if the output of the air stripper unit is zero. Mr. Sussman responded that was correct and that they test and verify. Mr. Sussman said that the zero was not just a presumption, and that air strippers are very efficient, especially with something like TCE and especially at that concentration.

Mr. Birdsall asked if the carbon units' effluent results are zero. Mr. Sussman responded, yes. Mr. Ellis asked for an opinion on what the project will look like in five years. Mr. Sussman went on to explain that they are reactivating the PGA-South groundwater model, and that is our predictive tool. Mr. Sussman stated that they have been working on this project for twenty years and that by the time he retires the project will still not be done and that they might be able to share some projections from the model output in the August or November CAG meetings.

Mr. Birdsall asked if the aquifer that was discussed with regard to the replacement wells was the shallow aquifer. Mr. Sussman replied, yes. Mr. Birdsall asked what is the depth of those wells compared to the depth of the aquifer. Mr. Sussman stated that those wells fully penetrate Subunit A. Mr. Birdsall then asked if both the new and old wells fully penetrate. Mr. Sussman replied that they screened the lower 40 feet, and that they have a very adequate screen. Mr. Sussman stated that the only way that those wells will not be effective at some point in the future, is if Subunit A is completely dewatered.

Mr. Barbetta asked when they do the chromium analysis, are they going to show total chromium or are they going to break it down to Chromium 3 and Chromium 6. Mr. Sussman replied that they test for total chromium. Mr. Sussman indicated that some samples had been analyzed for Chromium 6 and that sampling indicates that almost all of the chromium is Chromium 6.

Mr. Raible asked if GAC-04 is still inconclusive as to whether it is a conduit for Subunit A to C. Mr. Sussman replied that chemically it is. Mr. Raible stated that he understood that the rebounding affect implies that it would be a conduit well but the chemical signature implies that it is not. Mr. Sussman answered that that was correct.

6. Update of PGA-North activities –Stephanie Lyn Koehne and Harry Brenton AMEC Geomatrix, Inc., Project Manager

Mr. Brenton and Ms. Koehne initiated their presentation with an update on PGA-North activities.

See slide presentation below

Mr. Ellis asked for a time estimate on when the water from EA-08 will be sent over to 33-A. Mr. Brenton answered that their agreement with Goodyear is a two year period. Mr. Brenton also said that they needed to complete a work plan and submit it to EPA.

Mr. Ellis also asked if all of the injection wells had about equal capacities as far as injection. Mr. Brenton replied, yes.

Ms. Krone asked for a definition of a piezometer well. Mr. Brenton responded that a piezometer is essentially a monitoring well. Mr. Brenton added that it is a hydrologic term to describe a well to monitor the peziometric surface, or water table.

Mr. Ellis asked that Mr. Brenton provide a map for the CAG with a key for easier locations of the wells. Mr. Ellis indicated perhaps a road map with a key indicating the wells locations and plumes and put some red lines on it with the well designations. Mr. Brenton said they would work something up and get it to him.

Ms. Kagan inquired about the continued delay with the Pebble Creek Home Owners Association. Mr. Brenton replied that they met sometime ago with the appropriate individuals and that they are just in the legal paperwork phase now and that Crane Co. was very close to a resolution. Ms. Kagan asked if there is anything the CAG could do to help.

Ms. Koehne stated that it is now in the legal realm and they just have to wait for completion of an accepted access agreement. Ms. Koehne also stated they wouldn't be this far along without former CAG member Brenda Holland's help. Mr. Smith asked for an explanation of the change in concentration profile for monitor well MW-16. Mr. Brenton replied that the change at MW-16 is likely due to 33A pumping. Mr. Brenton also stated that there are also some public supply wells pumping there as well where MW-16 is and that what they are seeing is a migrational trend.

Ms. Krone asked if they were still thinking about doing a similar injection field in that area. Mr. Brenton responded, yes. Mr. Brenton indicated that they have had very good success in the northeast area and have similar plans for the northwest area.

Ms. Amos asked about plans for improvements at the treatment in the MTS area. Mr. Brenton stated that they have extraction wells on site and also have planned activities for 2012/2013 for the site. We have also put in an additional sentinel well, MW-58A and that the initial sample from MW-58A was non-detect and that it continues to be a below 1 parts per billion (ppb), I believe since November 2011. Mr. Brenton stated that City of Goodyear (COG) 3 continues to be non detect. Mr. Brenton said that the extraction on site plus the system enhancements will ultimately take care of the isolated plume at MW-10A.

Mr. Ellis asked Mr. Brenton if they were pretty sure those old wells are no longer conduit wells. Mr. Brenton replied, yes because they abandoned them in 2006.

Mr. Raible stated his concern was that TCE would be in MW-10C and the flow is to the west side. Mr. Brenton responded that the flow is to the west but to keep in mind to that this happens when COG-3 is pumping. Mr. Brenton added that they do see local shifts toward the east. Mr. Brenton also stated that COG-3 pumps very sporadically and for short periods of time due to municipal demands and is not a sustained flow and the concentration trends for MW-10C are very stable.

Mr. Raible asked about the Source Area Focused Feasibility Study, requested timeline of the events related to the decision on what technology will be used. Mr. Brenton gave a breakdown of events starting with the submission of the workplan to the EPA and ADEQ, who will then provide comments. Mr. Brenton said they were expecting comments by February 20th. Mr. Brenton said that they would then address the comments and try and expedite the process with a face-to-face meeting with EPA. Mr. Brenton deferred to Ms. Brown of the EPA for a more specific timeline. Mr. Raible stated that he realized it would take some time to conduct this study and was not looking for a commitment on those timelines, but he wanted to get a sense of the overall time.

Ms. Amos asked why there was a difference between the plume map shown on the 2009 map and the map shown now. The most westerly extent has moved further west, that bump out, the difference between that and 09, what do you attribute that pulling to the west. Mr. Brenton replied that this is related to samples that we put in. Mr. Brenton said that as they put in more monitoring wells, throughout the plume area, it helps them to refine the extent of the plume. Mr. Brenton added that the contamination has more likely been there for awhile; we just found it with the continued installation of the groundwater monitoring wells and were able to further refine the shape of the plume. Ms. Koehne stated that in the last year they have installed three new wells on that western side, so that's really enabled them to define the extent of the plume and would also account for the shape change. Mr. Brenton replied that AMEC continues to add monitor wells each a year just to help refine the shape of the subunit A and subunit C plumes.

Mr. Raible ask if air stripping was proposed. Mr. Brenton replied yes, that's one of the technologies that was already in use. Mr. Raible asked are you are proposing more than one technology. Mr.

Brenton replied that we are looking at about six.

Mr. Ellis stated his observation of the numbers from November and December at the monitoring wells and that the numbers were slightly higher in December. Mr. Ellis also questioned if Crane Co. expected to see that and Mr. Brenton replied, yes. Mr. Brenton stated that it is not uncommon to see concentrations fluctuate and that the numbers fluctuate when water levels are lower in December. Mr. Brenton went on to explain that a lot of the changes were related to lab variability. Ms. Kohne stated that with any sample concentrations, there can be up to 30% variability in the laboratory, so if it is within that range, it's really not an increase or decrease. Mr. Ellis asked for a confirmation that nothing out of the norm was going on there. Mr. Brenton stated that in the northeast, no. Mr. Ellis questioned if it was the northeast or toward the north central part. Mr. Brenton replied certainly, with respect of the concentrations that we have in MW-50 and MW-3, but we did see as EA-08 developed and it's capture zone expands and that's what we expected. Mr. Ellis stated that he was looking for them to be going down because of the injection. Ms. Koehne asked are you looking more at the central portion. Mr. Ellis stated that all of these red ones (on the map displayed) are higher in December than in November. Mr. Brenton replied, yes and to keep in mind too that as those extraction wells pump the contamination is moving through so they will have some residual concentrations, especially near the extraction wells because we are pulling the plume toward the extraction wells.

Mr. Raible asked who actually installs the wells. Mr. Brenton replied AMEC installs the monitoring wells. Mr. Brenton added that wells are chosen in conjunction with the Agencies and they are consulted and a location is selected based on those discussions. Mr. Raible asked if the location of EPA MW-62A was chosen because there was not much coverage in that area. Mr. Brenton replied that that was correct and that it allows AMEC to refine their understanding of what is happening.

The CAG took a 5-minute break.

7. U.S. EPA update for PGA-South and North activities – Catherine Brown, U.S. EPA Remedial Project Manager

Ms. Brown responded to Mr. Ellis' request for the Agencies to grade the CAG and said that she thought the CAG was doing a tremendous job of keeping track of all the data and more importantly the meaning of the data and that the questions they posed were good ones. Ms. Brown said that EPA's management as well as ADEQ's management has really tasked us to focus on CERCLA/Superfund related progress. Ms. Brown stated that the main focus is to try to pinpoint progress on the Superfund site and what those individual tasks are to get us there. Ms. Brown said that at PGA South there were a couple areas that they are continuing to investigate for the Remedial Investigation (RI), but that she feels they are headed toward the RI to help them reach decisions on whether or not we have to make changes to the cleanup for chromium in subunit C or the TCE in GAC-04. Ms. Brown indicated that the evaluation of the 20 year old infrastructure is very important relative to PGA-South. Ms. Brown also stated that the vulnerability analysis is very important to help with release prevention. Ms. Brown also expressed her support to Goodyear Tire for going back to retool the model to help them optimize the cleanup of subunit A. Ms. Brown further went on to commend Goodyear Tire for their early and almost immediate agreement to do their part for the "Area Between the Sites" analysis that is underway. Ms. Brown indicated that this analysis will help determine ground water contours as well as concentrations in the various plumes that hadn't previously been analyzed.

Ms. Brown reiterated the importance of the preventative maintenance activities described by AMEC and that she highly recommends a site visit to view those items as part of the upcoming CAG tours. Ms. Brown stated that the capture zone analysis relative to all the systems north of I-10 and the

Focused Feasibility Study for the source area are going to be priorities for the coming year.

Ms. Brown added that the EPA has come to an agreement with AMEC about additional Subunit C wells needed to help analyze and remedy the source area. Ms. Brown said the Focus Feasibility Study with the suggested technologies is still under review. Ms. Brown indicated that before the study could be completed the hydrologists needed to have more discussions on the proper mix and combinations of the proposed technologies. Ms. Brown stated that enhancements to the onsite extraction system and the soil vapor extraction (SVE) enhancements are important pieces of work currently underway.

Ms. Brown then updated the CAG on the Pebble Creek issue. Ms. Brown said that the EPA received and answered questions and discussed the possibilities and types of disturbances the proposed well might cause them. Ms. Brown said that after the Q&A session with the community it had agreed to the well installation and that the agreement is currently with their legal counsel for finalization

Mr. Ellis asked if the community had given conceptual approval. Ms. Brown said, yes. Ms. Brown went on to say that EPA was developing a draft of a community engagement plan for the entire Site which will define how the EPA and ADEQ will engage and interact with the community. Ms. Brown said included in that plan will be the notification process to basic property owners in a case of a release.

Ms. Brown discussed the “Area Between the Sites” analysis, its complexity and that she is encouraged by the results so far and that she hoped to have more information by the next CAG meeting.

Ms. Brown responded to Mr. Ellis’ question on the how the CAG could best help the Agencies and indicated that for the proposed technical meeting that the EPA and ADEQ would prefer to receive specific questions to plan properly for CAG meetings. A discussion ensued about the Agencies receiving the data sooner from the responsible parties so they could provide their comments and perspectives during the CAG meetings. Ms. Brown stated that the EPA would need more than a few days to review all the data provided on the Sites prior to giving an opinion at a CAG meeting. Ms. Brown added that EPA would try and respond to the Group on items that they disagree with at CAG meetings and that questions from the presentations could be directed to the Agencies to address at the proposed technical meeting.

Mr. Raible asked Ms. Brown how long it would be before the Feasibility Study (FS) was completed and ready for public review. Ms. Brown responded as to a timeline that the hydrologists will probably come to agreement on the technologies relatively quickly but that the entire process is very complicated. Ms. Brown indicated that the data and alternatives need to be presented, then they have to be examined by and approved by the Agencies at which point the responsible party then produces the work plan that describes how to implement the alternatives that were selected. Ms. Brown also stated that before the work plan takes place there has to be public acceptance. Ms. Brown stated that due to the variables involved she was unable to give a more defined timeline but that she could say with certainty it wouldn’t take 10 years to complete.

8. ADEQ report on PGA-North and South activities – Travis Barnum, ADEQ Project Manager

Mr. Barnum reiterated the need for Site visits and proposed, for PGA-North and South a confirmed the time frame with Ms. Brown for the week of April 24th which coincided with Ms. Brown’s meeting with Palm Valley Estates.

Mr. Raible urged Mr. Barnum to narrow the dates down as quickly as possible so participations could

make arrangements to attend.

Mr. Barnum cited the monthly activity report prepared by ADEQ. Mr. Barnum stated if the CAG was interested he could provide presentations on CERCLA or hydrology. Mr. Barnum indicated he is always available to address CAG questions or concerns but asked that he be given 30 days to respond to their questions.

9 ADEQ report on Western Avenue (WA) WQARF site: Delfina Olivarez, ADEQ Project Manager

Ms. Olivarez updated the CAG on site activities that included: water level gauging of the WA well network; water quality samples of the COG-1 well; and water quality samples of the WA site wells.

See slide presentation below

Mr. Ellis asked if COG-1 had been sample between those times (points to a graphic). Ms. Olivarez responded that the ADEQ did not sample COG-1 in this time period Mr. Ellis inquired about. Ms. Olivarez also indicated that although ADEQ did not sample it doesn't mean it wasn't sampled by the City of Goodyear. Ms. Olivarez advised Mr. Ellis that she would acquire a definite answer for him if he wanted it.

Ms. Krone then requested a definition of non-detect in COG-1. Ms. Olivarez indicated that it meant that was below the Aquifer Water Quality Standards of 5 micrograms per liter. Ms. Krone indicated that she thought that non-detect meant that it did not actually detect, not that it's below the sampling level. Ms. Olivarez then asked Mr. Mike Long of Hargis + Associates to respond. Mr. Long indicated that most of the wells in that area are non-detect and being non-detect they are below the standard. Ms. Krone reiterated that she understood that the two definitions were not the same as the other. Mr. Long stated that if a sample from a well is non-detect, it means that the concentration is below the machines ability to detect it so her understanding was correct.

Mr. Smith asked Ms. Olivarez if she gave the test results from COG-1 to the City of Goodyear. Ms. Olivarez answered that as the Project manager, she had not. Mr. Smith asked if that sounded reasonable to her. A discussion then ensued between Ms. Krone, Mr. Smith, Ms. Olivarez and Ms. Thies about ADEQ's results and communication methods to the City of Goodyear (COG). Ms. Krone and Mr. Smith wanted to know why ADEQ was not proactively sending test results to COG. Ms. Olivarez and Ms. Thies indicated that COG had not requested receipt of the results but that COG had access to the results through public records of the quarterly meetings and monthly updates. The COG is in the Western Avenue WQARF site and the ADEQ was asked to sample COG-1 to determine if the contamination migrates towards it.

Mr. Birdsall asked if ADEQ does not report normal levels to COG would it report abnormal levels as soon as you have those indications. Ms. Olivarez stated that definitely, yes in that instance ADEQ would notify COG.

Ms. Krone then stopped the discussion to say that she felt that Ms. Olivarez's conduct was extremely disrespectful and very unprofessional. Ms. Krone stated that she felt many people at the meeting would agree on Ms. Olivarez's conduct. Ms. Krone indicated that Mr. Smith had asked a legitimate question and the he should get a legitimate answer. Ms. Krone then stated that Ms. Olivarez didn't need to be defensive or be belligerent with Mr. Smith. Ms. Olivarez stated that she wasn't being belligerent. Ms. Krone indicated that she had not finished speaking and that she had been designated to be in charge of the CAG meeting and that she didn't want to see that behavior again. Ms. Krone also stated that she had seen that behavior in two CAG meetings now. Ms. Krone indicated the behavior was seen from Ms. Thies and now from Ms. Olivarez. Ms. Krone stated that the meetings were an opportunity to educate the community.

Ms. Krone stated that the community was asking questions and asking for certain things and that she expected a level of professionalism without all the emotionalism going on. Ms. Krone stated that she couldn't continue a meeting with ADEQ people acting very disrespectful to one of the CAG members. Ms. Krone indicated that Ms. Olivarez could answer Mr. Smith with the same information but in a respectful manner. Ms. Krone indicated that this particular well was a high priority as it was a public drinking water well. Ms. Olivarez then indicated that she was not trying to be disrespectful and apologized to Mr. Smith if it had appeared that way. Ms. Olivarez added that the State of Arizona holds these meetings so that the ADEQ can convey our analysis of the Western Avenue site, not only to City of Goodyear, but the City of Avondale and Tolleson and all the other interested community members. Ms. Calderon then asked to move forward with other business. Ms. Calderon stated that she had the issue down as an action item and would respond to Mr. Smith. Ms. Olivarez finished her presentation and Ms. Krone asked how long Western Avenue had been in the FS phase. Ms. Thies stated that the RI report was completed in fiscal year 2010, and that in June of 2010 Western Avenue moved into the FS phase.

10. Call to the Public

Ms. Moore indicated she would send her inquiries directly to Ms. Calderon to distribute to the appropriate individual.

11. Future meeting and agenda items discussion

Ms. Calderon announced that the next CAG meeting will be held on Thursday, May 3, beginning at 6:00 p.m. at the Goodyear City Hall. Agenda items for the next CAG meeting included: a discussion from EPA on the area between the sites, site tours status and an update on the CAG technical meeting.

12. Adjournment

Ms. Krone adjourned the meeting.

Phoenix Goodyear Airport-South Project Site Status Report

Community Advisory Group Meeting
February 9, 2012

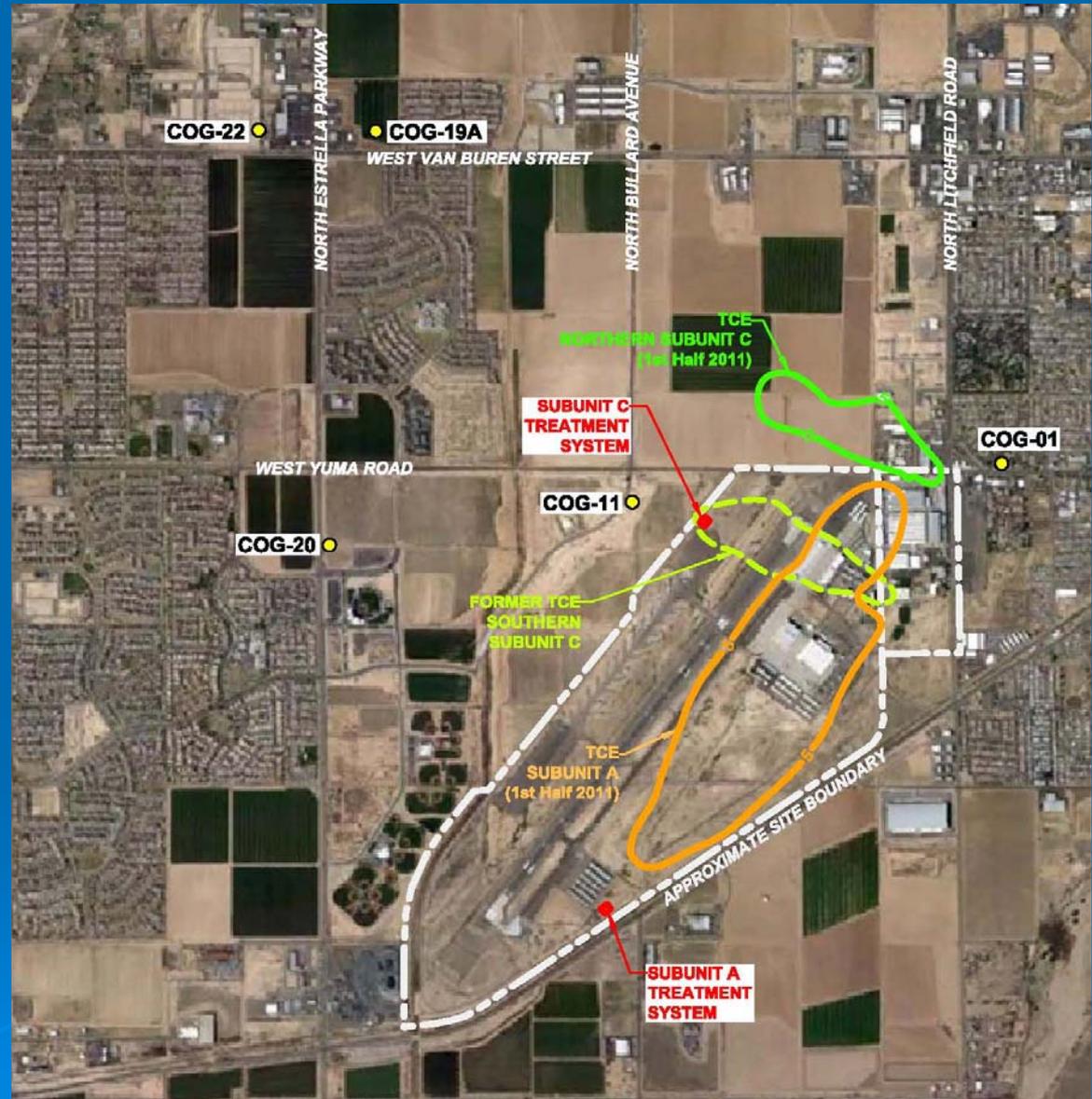
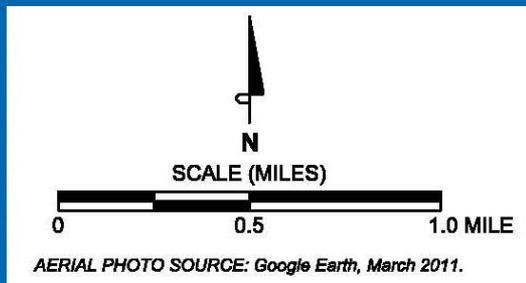
Jeffery Sussman
Remediation Manager
The Goodyear Tire & Rubber Company

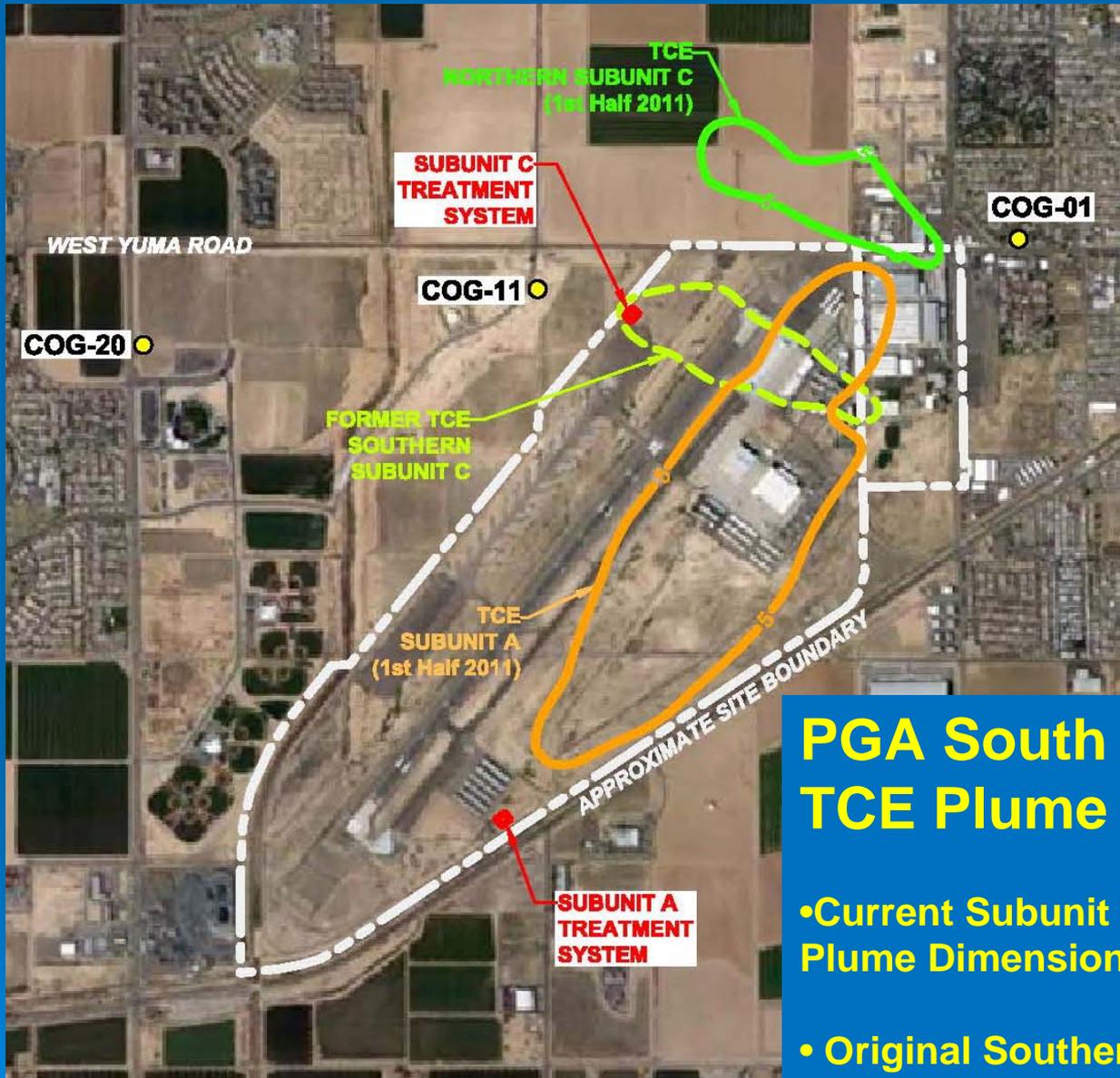


Agenda

- PGA South Site – Plume Locations
- Update Status of Ongoing Cleanup
- Review Current Activities
- Upcoming Activities

PGA South Site TCE Plumes and City of Goodyear Active Water Supply Well Locations





PGA South Site TCE Plume Locations

- Current Subunit A and Subunit C Plume Dimensions
- Original Southern Subunit C Plume Footprint



Current Plume Details

Subunit A Plume

- 12 Extraction Wells
- 39 Wells Monitored Currently
- 210 Gallon Per Minute (GPM) Extraction Rate

Southern Subunit C Plume

- 4 Extraction Wells (no current groundwater extraction)
- 16 Wells Monitored Currently
- 0 GPM Extraction Rate

Northern Subunit C Plume

- 1 Extraction Well
- 14 Wells Monitored Currently
- 250 GPM Extraction Rate

PGA South

Review of Current Activities

- Status of PGAS Clean-Up
- Subunit A Monitoring Well Replacement
- Monitoring of Southern Subunit C TCE Plume
- Monitoring of Northern Subunit C Plumes
- GAC-04 Evaluation and Further Investigation

Status of Ongoing Cleanup

Subunit A Aquifer

- Peak TCE concentrations in monitoring wells have declined from 2,600 µg/L in 1990 to 110 µg/L in November 2011
- Treatment System Uptime during 4th Quarter of 2011 was 99.5%

Subunit C Aquifer

- Peak TCE concentrations in Northern Subunit C monitoring wells have declined from 180 µg/L in 1990 to 82 µg/L in November 2011
- Treatment System Uptime during 4th Quarter of 2011 was 80%
 - Reduced uptime this quarter a result of carbon replacement and vessel refurbishing activities and extraction well E-102 pump replacement

Treatment System Remote Operation

Symantec pcAnywhere

File Edit Task Actions Help

Home Thumbnails AIRSTRIPPER

Remote Control

PGA Air Stripper - RSView SE Client

System Overview Southern Overview Aerial Overview

Graphs GAC #4 Alarm Summary

PGA Air Stripper Overview

Monday, January 30, 2012 11:45:04 AM

The diagram illustrates the PGA Air Stripper system. It features an **Influent Water pH** of 6.80 and an **Effluent Water pH** of 7.6. The system includes an **H₂SO₄ Acid Tank** with a **Metering Pump** for acid injection. The **Total Flow** is 486 GPM from the **Extraction Wells** and 477 GPM from the **Injection Wells**. The **VFD Discharge Speed** is 96% Full Speed. The **Packed Tower** has a **Vapor Temp** of 73 °F and a **Water Level** of 68 Inches. The **Air Blower** is running for 710 hours (Current Month) with an **Air Flow Rate** of 4626 CFM. The **Air Blower Control** is currently **ENABLED**.

Injection Pump #3 Control: Pump Control **DISABLED**, PLC CONTROL **ENABLED**

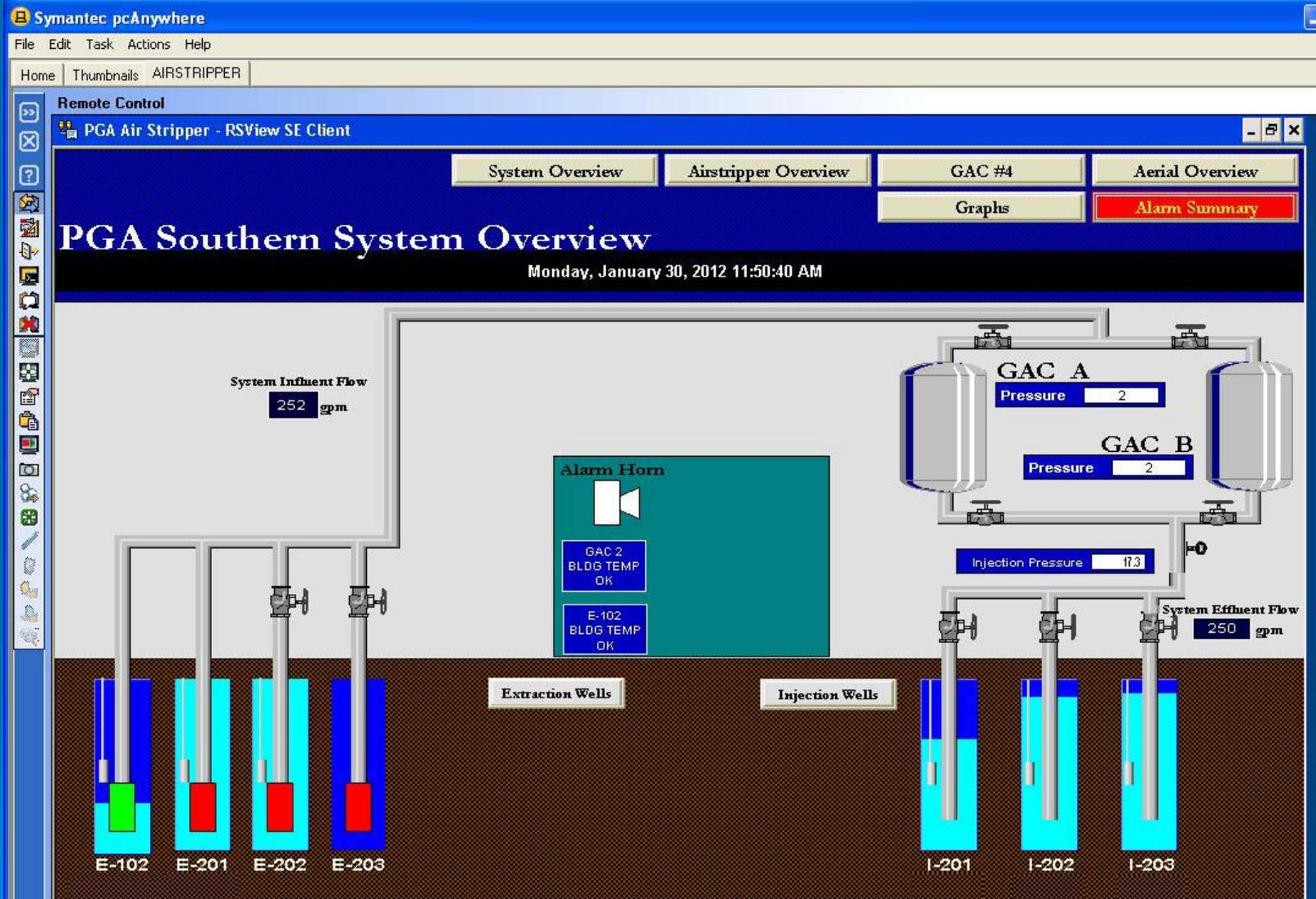
Injection Pump #2 Control: Pump Control **ENABLED**, PLC CONTROL **ENABLED**

Injection Pump #1 Control: Pump Control **DISABLED**, NOT PLC **ENABLED**

Air Blower Control: Blower Control **ENABLED**, PLC CONTROL **ENABLED**, Blower Reset

Buttons: Acknowledge Air Stripper Alarm

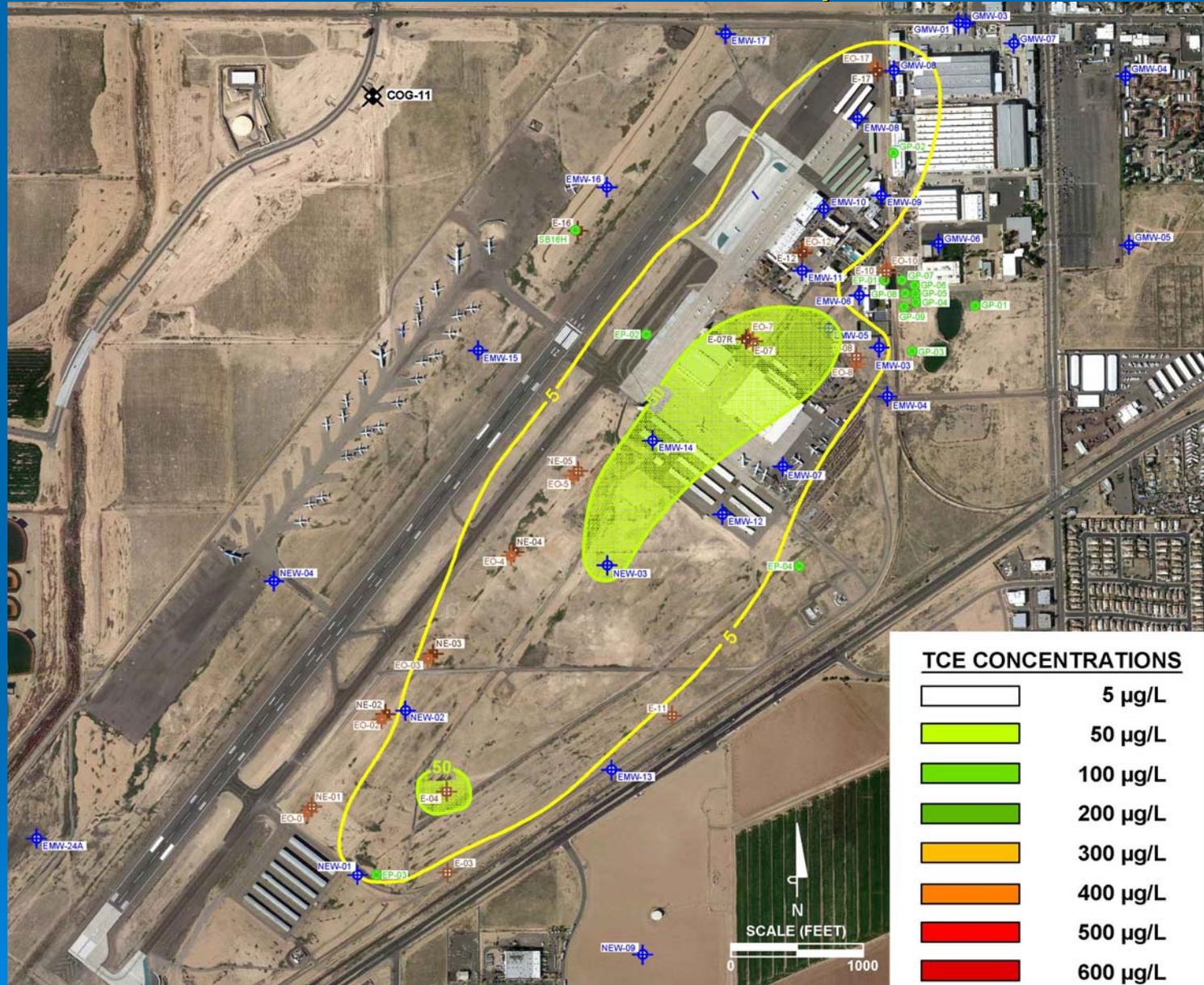
Treatment System Remote Operation



Groundwater TCE Cleanup Progress

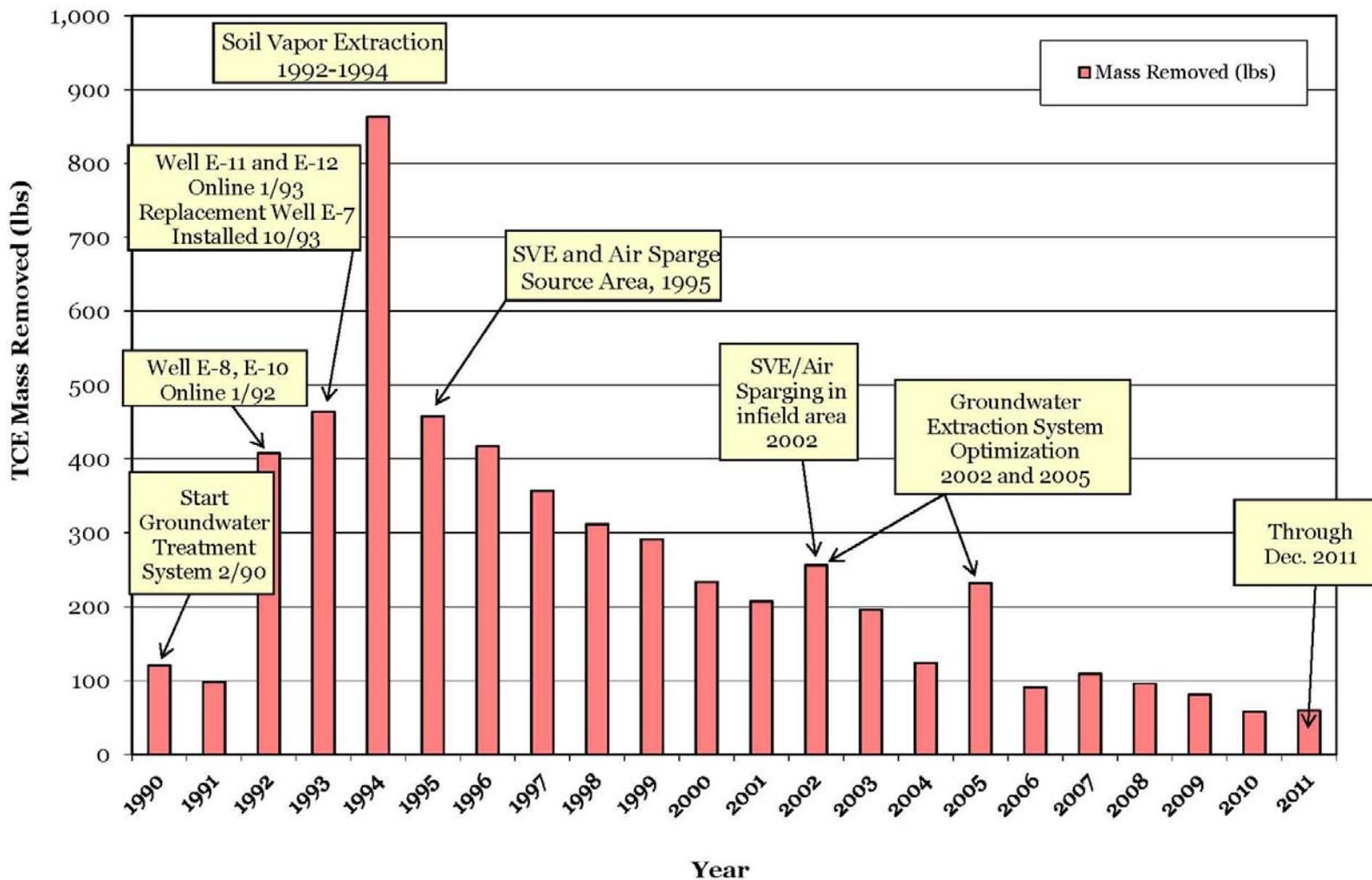
Subunit	Max TCE (µg/L) 1990	Max TCE (µg/L) November 2011	Cumulative Volume Pumped (Mgal)	Cumulative TCE Removed (Lbs)
Subunit A	2,600	110 (E-12)	5,591	5,537.3
Southern Subunit C	150	5.8 (GMW-10LC)	1,826	172
Northern Subunit C	180	82 (GMW-13UC)	2,317	64.4
		TOTAL	9,734	5,774

Subunit A TCE Map



Subunit A TCE Mass Removal vs. Time

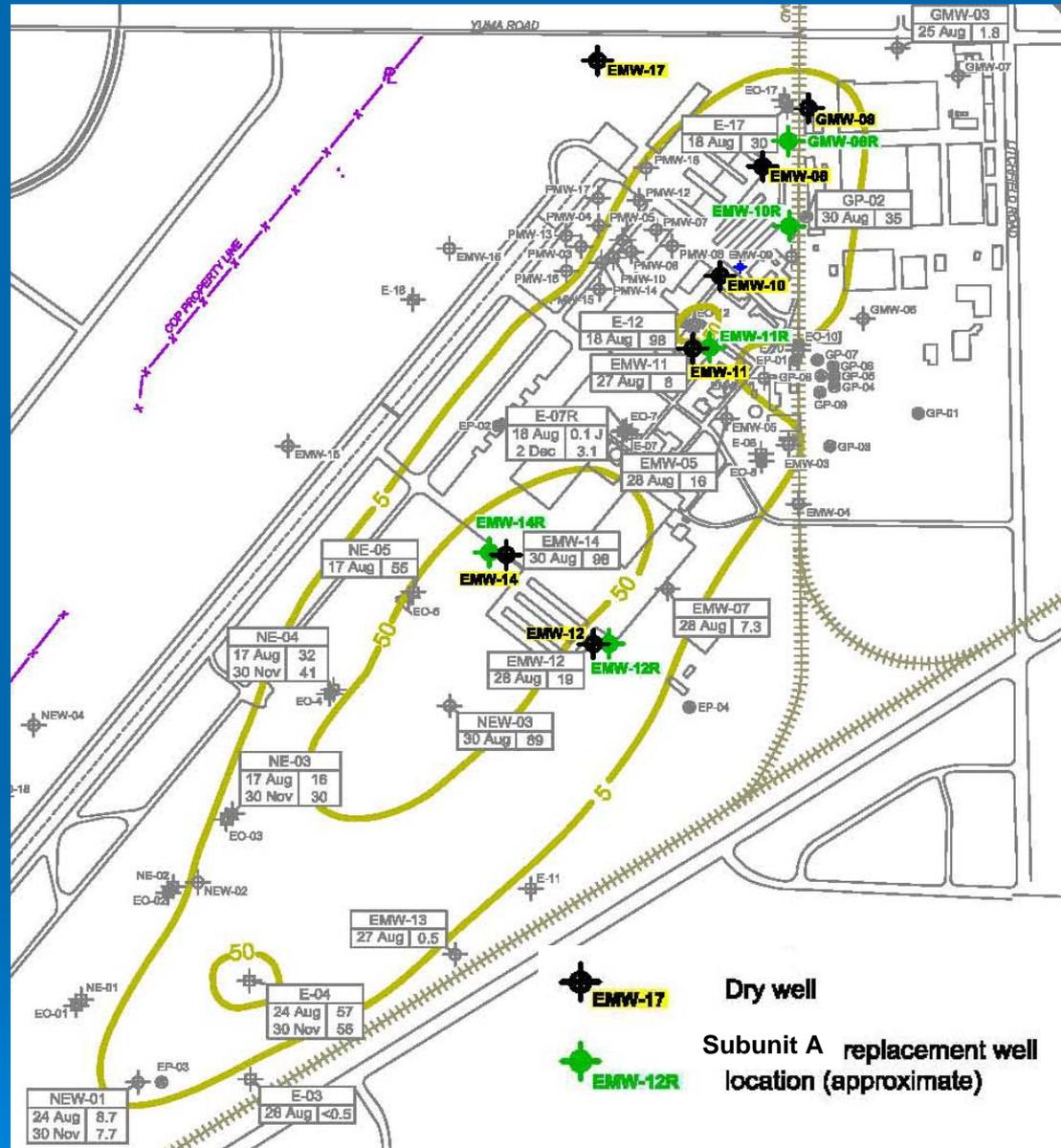
Subunit A - TCE Mass Removal Over Time Including History of Significant Removal Efforts



Subunit A Monitoring Well Replacement

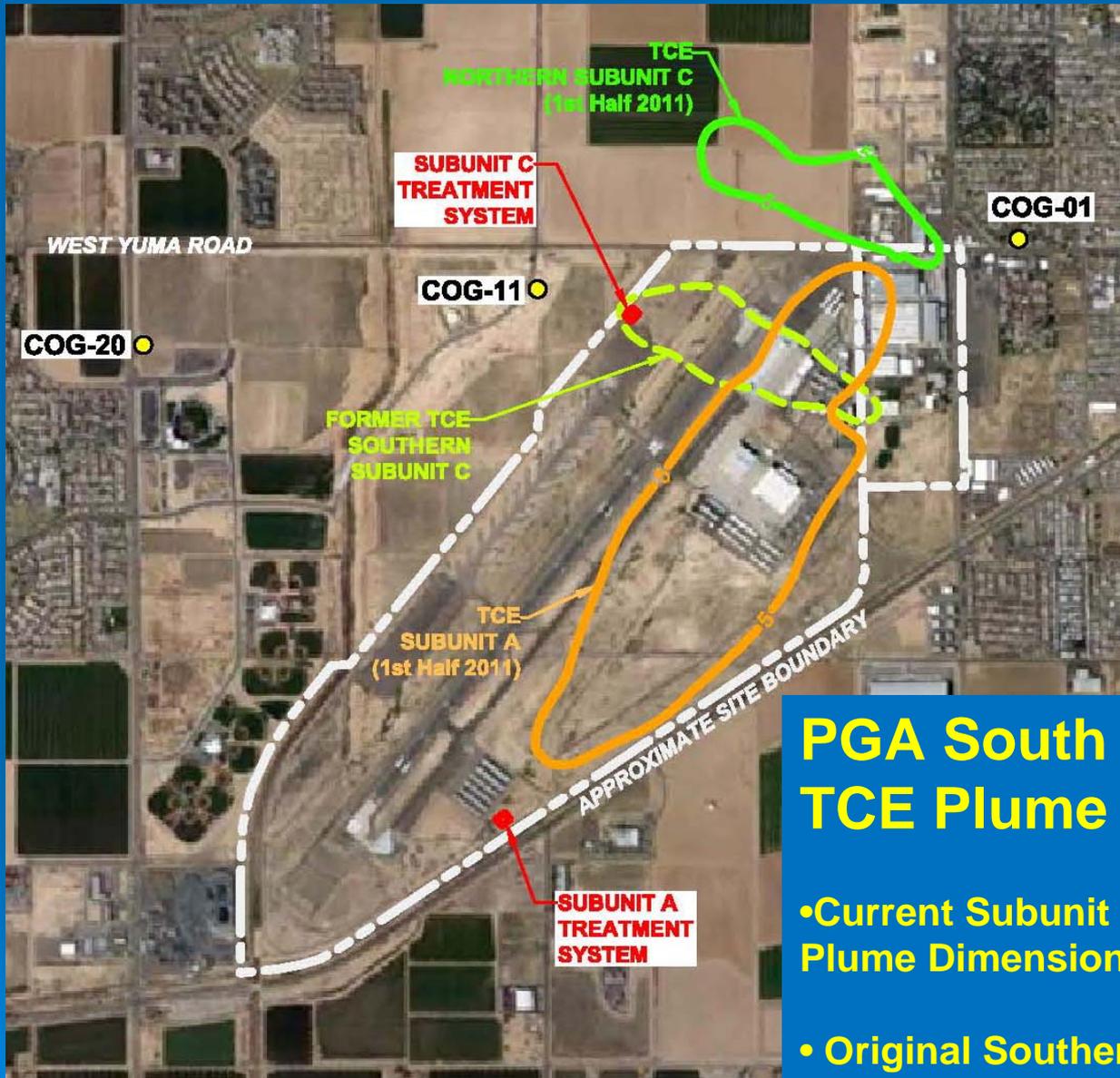
- A total of 8 Subunit A monitoring wells identified as having low water levels and no longer appropriate for sampling
- Abandonment of the 8 monitoring wells completed in December 2011
- Installation of 5 replacement Subunit A monitoring wells completed in January 2012
- New wells will be incorporated into long-term monitoring program

Subunit A Well Abandonments and Replacements



Southern Subunit C Monitoring Update

- E-201 shut off in September 2009 and quarterly monitoring began to evaluate potential rebound in TCE concentrations
- Southern Subunit C well TCE concentrations remain below 5 µg/l with a few exceptions
 - GMW-10LC
 - INJSB-05
 - SB-06UC
 - SB-11LC
- Expanded Southern Subunit C monitoring plan approved and initiated during the November 2011 monitoring event



PGA South Site TCE Plume Locations

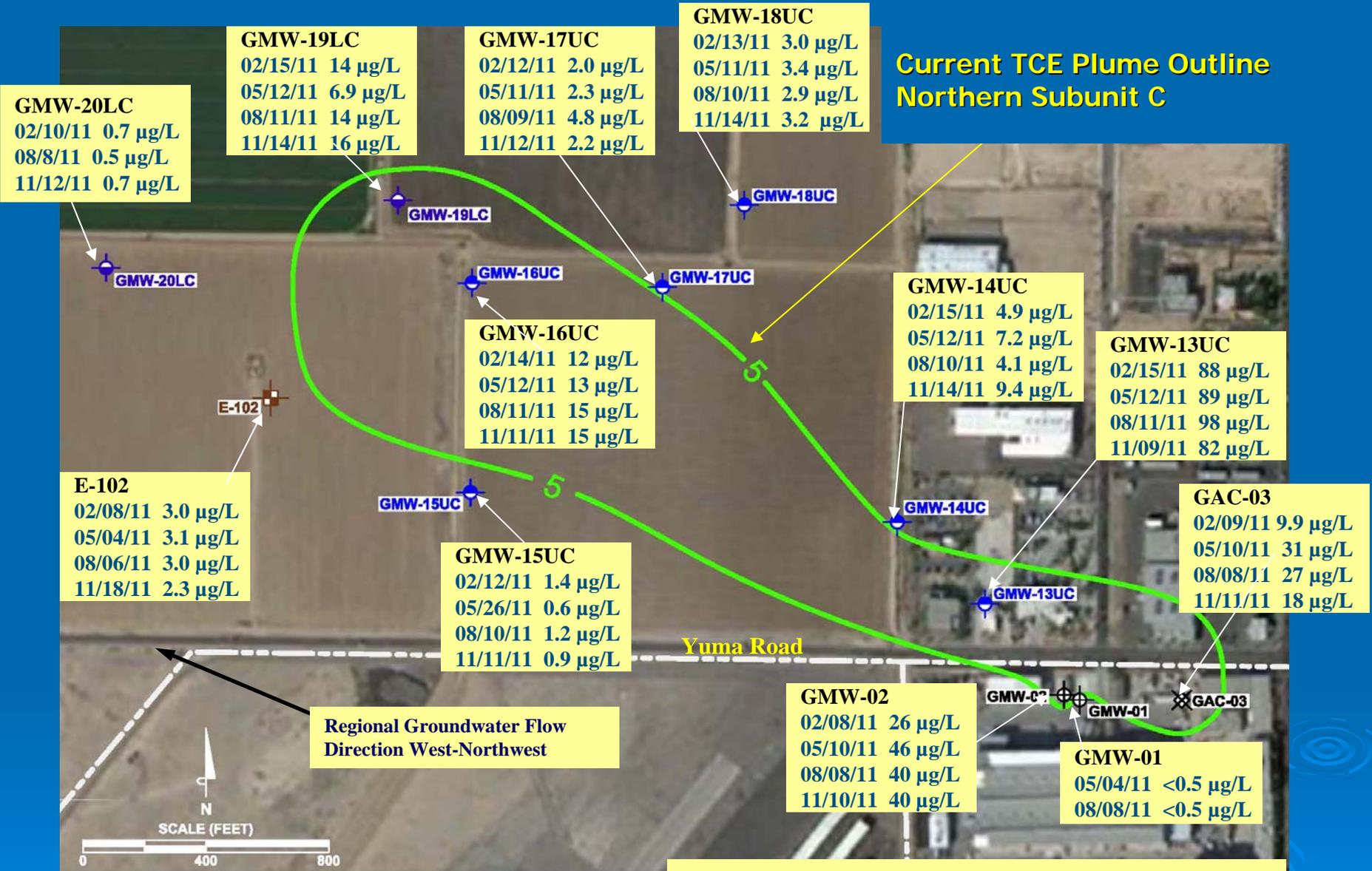
- Current Subunit A and Subunit C Plume Dimensions
- Original Southern Subunit C Plume Footprint



Northern Subunit C Monitoring Update

- Implemented agency recommendations and investigation in August & November 2011 including:
 - Monitoring of perchlorate and chromium at selected wells
 - Geochemical analyses (cations and anions) for selected wells
 - Environmental isotope analyses (oxygen, hydrogen, and sulfur) for selected wells
 - Resurvey of selected wells
- Submittal of Chromium Sampling & Analysis Evaluation Report on January 17, 2012

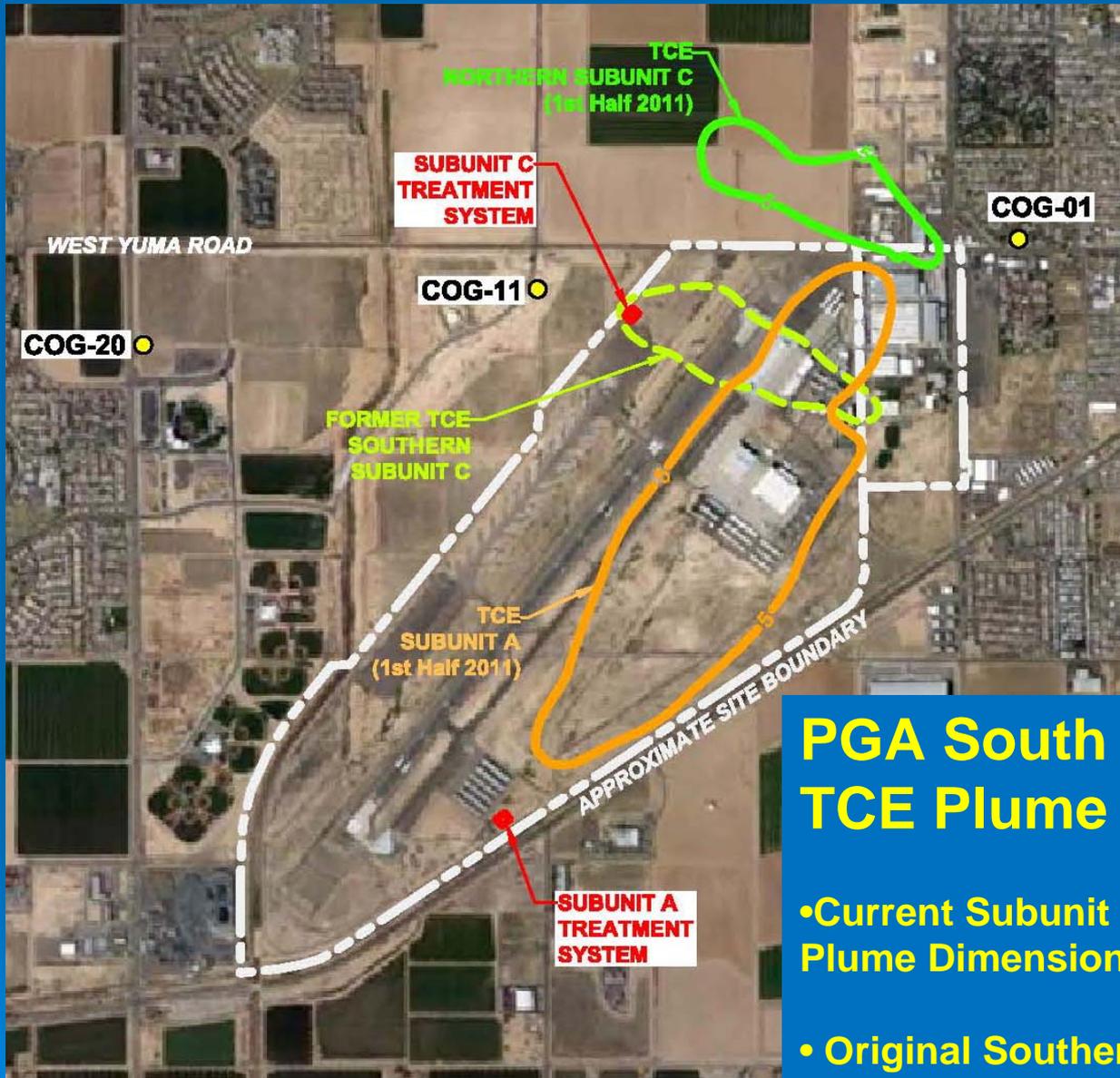
Current TCE Plume Outline Northern Subunit C



**Northern Subunit C TCE Concentrations
(Last 4 quarters)**

GAC-04 Investigation Update





PGA South Site TCE Plume Locations

- Current Subunit A and Subunit C Plume Dimensions
- Original Southern Subunit C Plume Footprint



GAC-04 Investigation Update

- Continued operation of GAC-04 and monthly sampling
- Additional GAC-04 investigation completed in August 2011: *GAC-04 Potentiometric Surface Study & TCE Evaluation Report, Sept. 30, 2011*
- Temporary shutdown of GAC-04 from Nov. 17, 2011 – Jan 24, 2012 for additional rebound testing, monitoring, and sampling upon restart for:
 - TCE
 - Geochemical analysis
 - Isotope analysis
- Installation of new Subunit C monitoring well near GAC-04 in January 2012 (GMW-23UC)

Upcoming Activities

- First Quarter 2012 Groundwater Sampling Event
 - Sampling scheduled for February 1-13, 2012
- Monitoring of new Subunit A Replacement Wells
- Further Evaluation of GAC-04 – Evaluation of data from new Subunit C monitoring well
- Continued Monthly Technical Conference Calls with USEPA / ADEQ
- Working with USEPA / ADEQ on Open Five Year Review Items

CAG Meeting

PGA-North Superfund Site
February 9, 2012



Stephanie Koehne, MBA, Project Manager
AMEC Geomatrix

Harry Brenton, RG, Principal Geologist
Matrix New World Engineering

PGA-N Overview



- A significant amount of testing continues to be performed to define/refine the Subunit A and Subunit C TCE plumes.
- All soil and groundwater remediation systems are fully operational – *including new EA-08 system in NW Area*
- Expanded Northeast Area Treatment Systems have contained the Subunit A TCE plume. Area Water Supply wells are being protected and
- We are working with the EPA towards a more “Regional Remediation Program” to control the plume.

REGIONAL GROUNDWATER TREATMENT SYSTEMS UPDATE



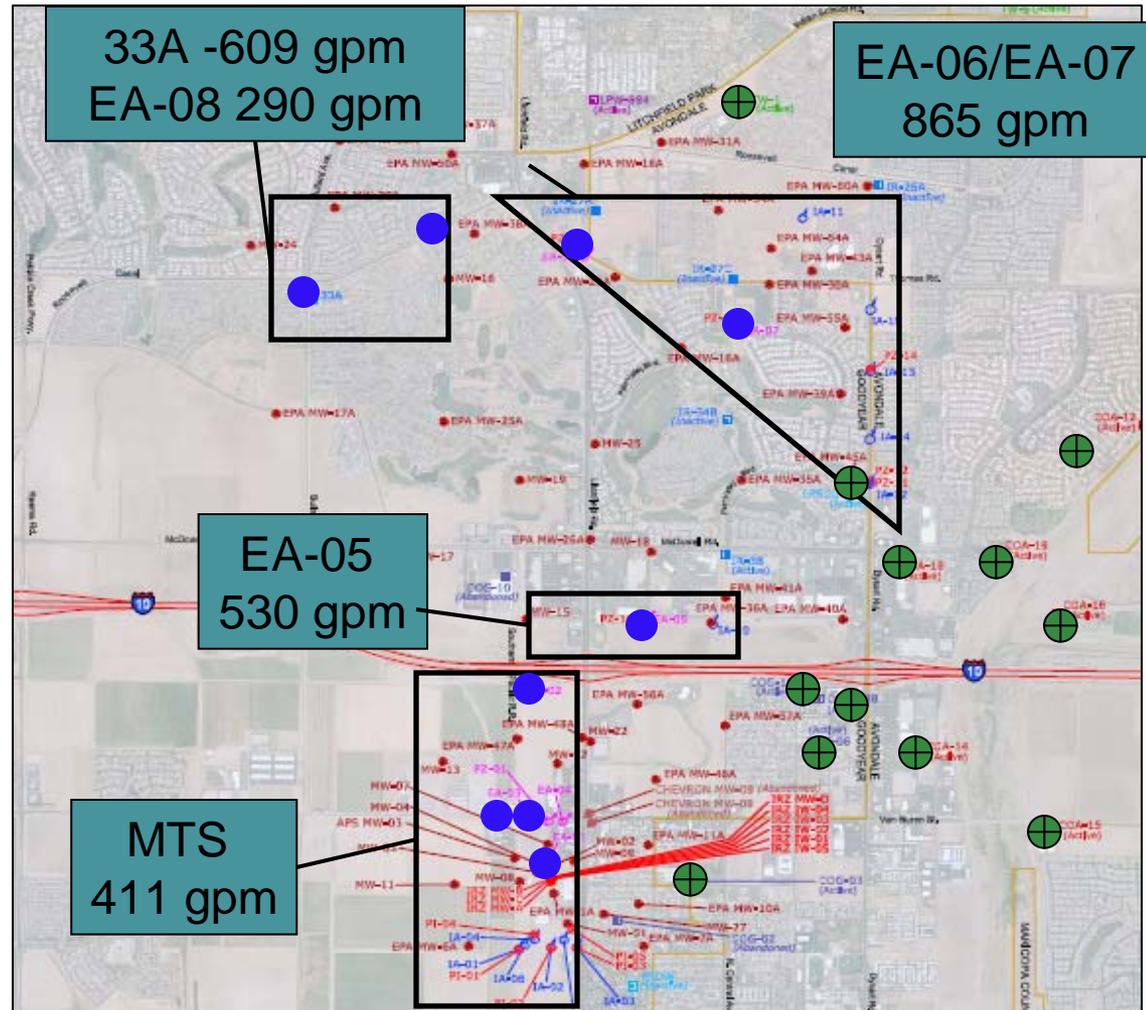
Groundwater Treatment Systems

- MTS – On-Site
- 33A/EA-08 – Northwest Area
- EA-06/EA-07 – Northeast Area
- EA-05 – Central Area-S of I-10

System Totals

- Combined Flow – ~2,700 GPM
- Total Water Treated in 2011 – 1.26 Billion Gallons
- To date Total TCE Mass Removed – 54,500 lbs

● =Extraction Well
⊕ =Drinking Water Supply Well



EXPANDED NORTHEAST GROUNDWATER TREATMENT SYSTEM

Expanded Northeast System Details

Extraction Well EA-07

- Increased flows in area by 90%
- Injection into IA-11, IA-12 and IA-13
- Injection wells IA-14 and IA15 are in but are not currently being used

EA-06 GTS Totals (Thru Dec 2011)

- EA-06- 506 GPM; EA-07 – 359 GPM
- Flow rate to injection wells – 865 GPM
- 274 Mgals of water (841 ac-ft) into IA-11
- 248 Mgals of water (761 ac-ft) into IA-12
- 27 Mgals of Water (82 ac-ft) into IA-13

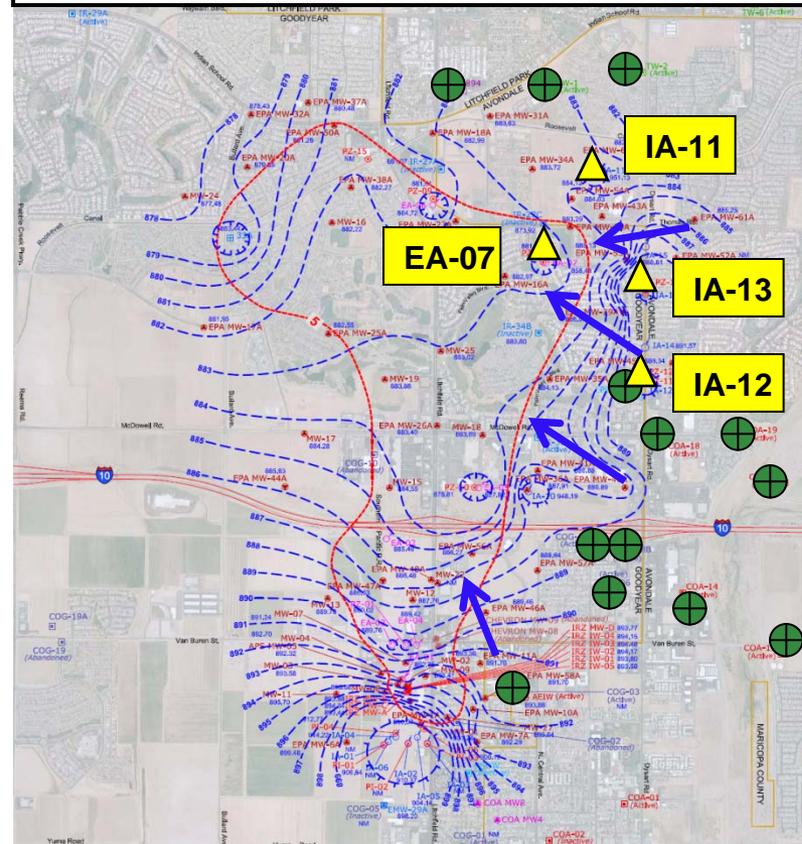
Results

- Hydraulic barrier created with 3 INJ Wells
- Drinking Water Supply wells are protected
- Summer 2011 pumping did not reverse flow

= Groundwater Flow Direction

= Drinking Water Supply Well

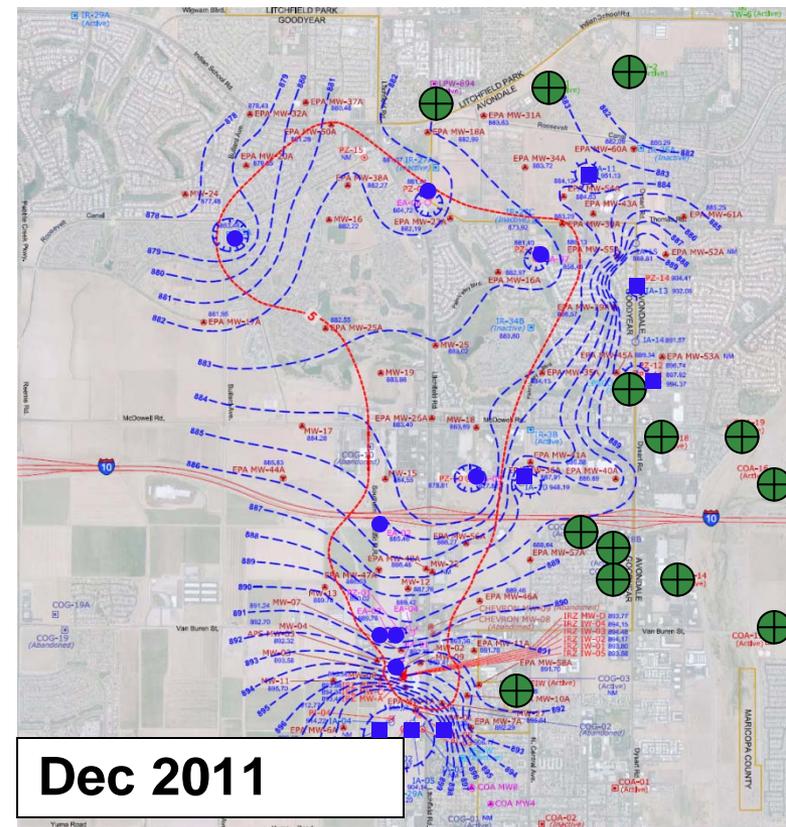
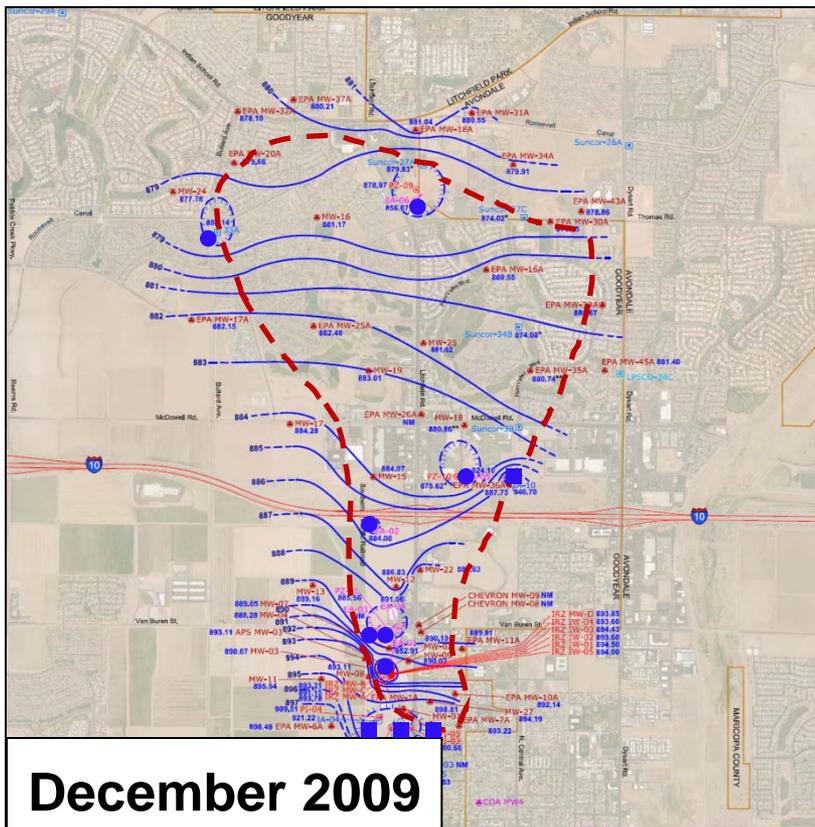
= NE Treatment System Well



EXPANDED NORTHEAST TREATMENT SYSTEM - Continued



- Since 2009, the Subunit A TCE plume has remained relatively stable
- TCE has been reduced in key sentinel wells
- Injections have contracted the plume in the Northeast Area



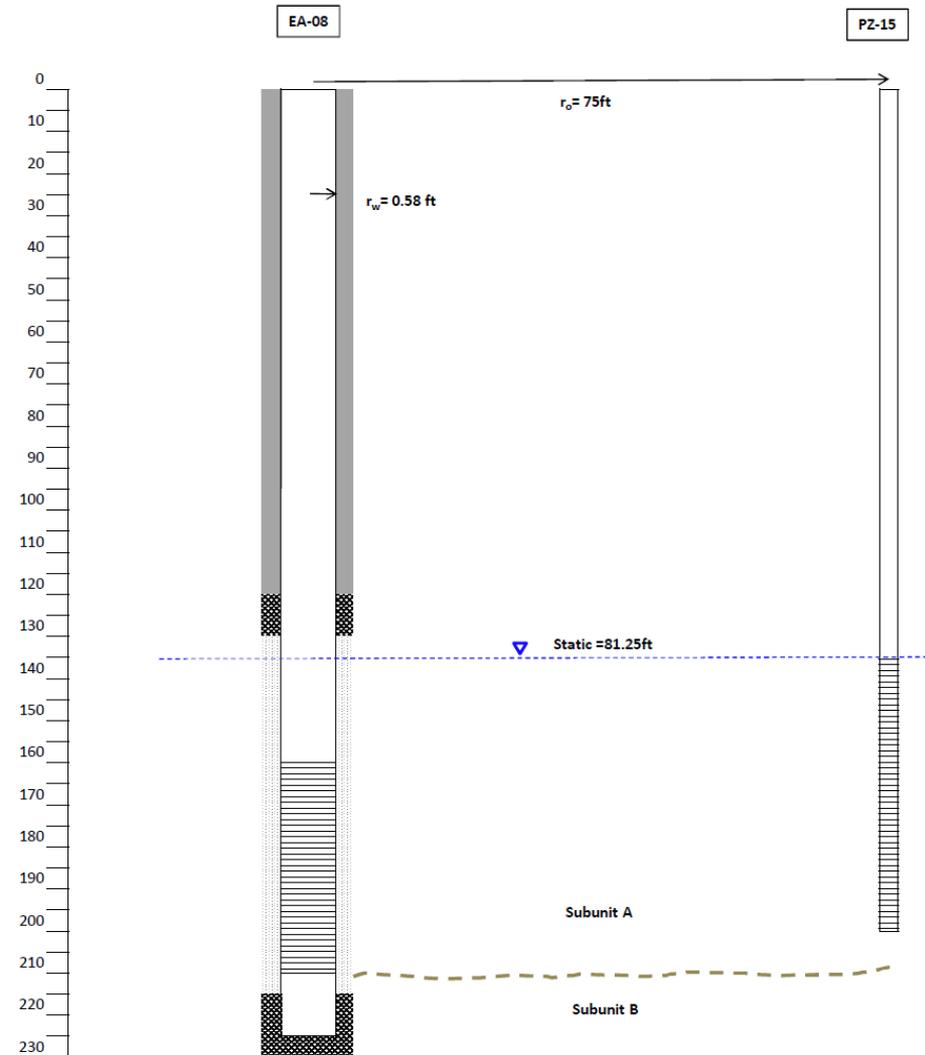
NW Area EA-08/PZ-15 Specs

EA-08

- Total Depth = 230'
- 14-inch Diameter Steel
- SS Louvered Screen (.050")- 160' – 215'
- 0.050-inch slot size
- Stainless Steel Sump - 215' -225'
- Pump intake - 213'

PZ-15

- Located 75 ft east of EA-08
- Total Depth 200'
- 2-inch Diameter PVC
- Screen (.020") -130'- 200'



Key NW Area Monitor Well Data

- Key Northwest Area Subunit A monitor wells
 - EPA MW-32A EPA MW-37A EPA MW-38A
 - EPA MW-50A MW-16 MW-24
 - EPA MW-20A EPA MW-51A**

- No TCE detected in EPA MW-32A and MW-37A since installation

- TCE has been consistently > 5 µg/L in EPA MW-38A and EPA MW-50A
 - EPA MW-38A - TCE_{ave} = 126.5 µg/L; EPA MW-50A - TCE_{ave} = 13.7 µg/L

- TCE in MW-16 has been as high as 220 µg/L (Aug 2004)
 - Since Jul 2011 TCE has declined by an order of magnitude

- EPA MW-20A TCE concentrations vary based on the operation of extraction well 33A

- TCE in MW-24 has been consistently < 5 µg/L

- PZ-15 will be also be sampled monthly for 6 months –1st Sample Jan 2012 (no results yet)

Key NW Area Monitor Well Data

NW Area Monitor Wells TCE- Dec 2011

EPA MW-32A = <0.19 U $\mu\text{g/L}$

EPA MW-37A = <0.19 U $\mu\text{g/L}$

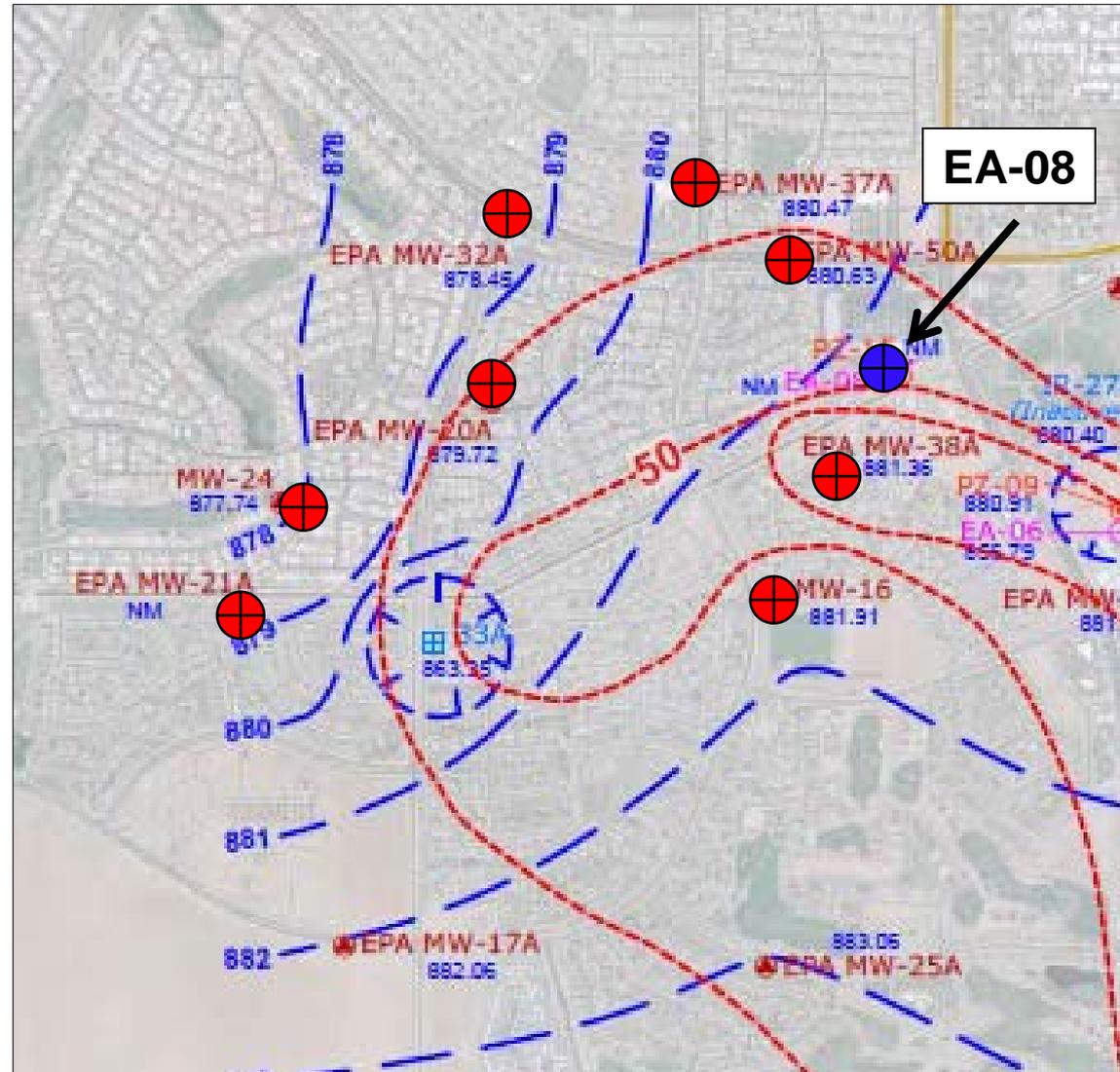
EPA MW-38A = 120 $\mu\text{g/L}$

EPA MW-50A = 14 $\mu\text{g/L}$

EPA MW-20A = 0.25J $\mu\text{g/L}$

MW-16 = 19 $\mu\text{g/L}$

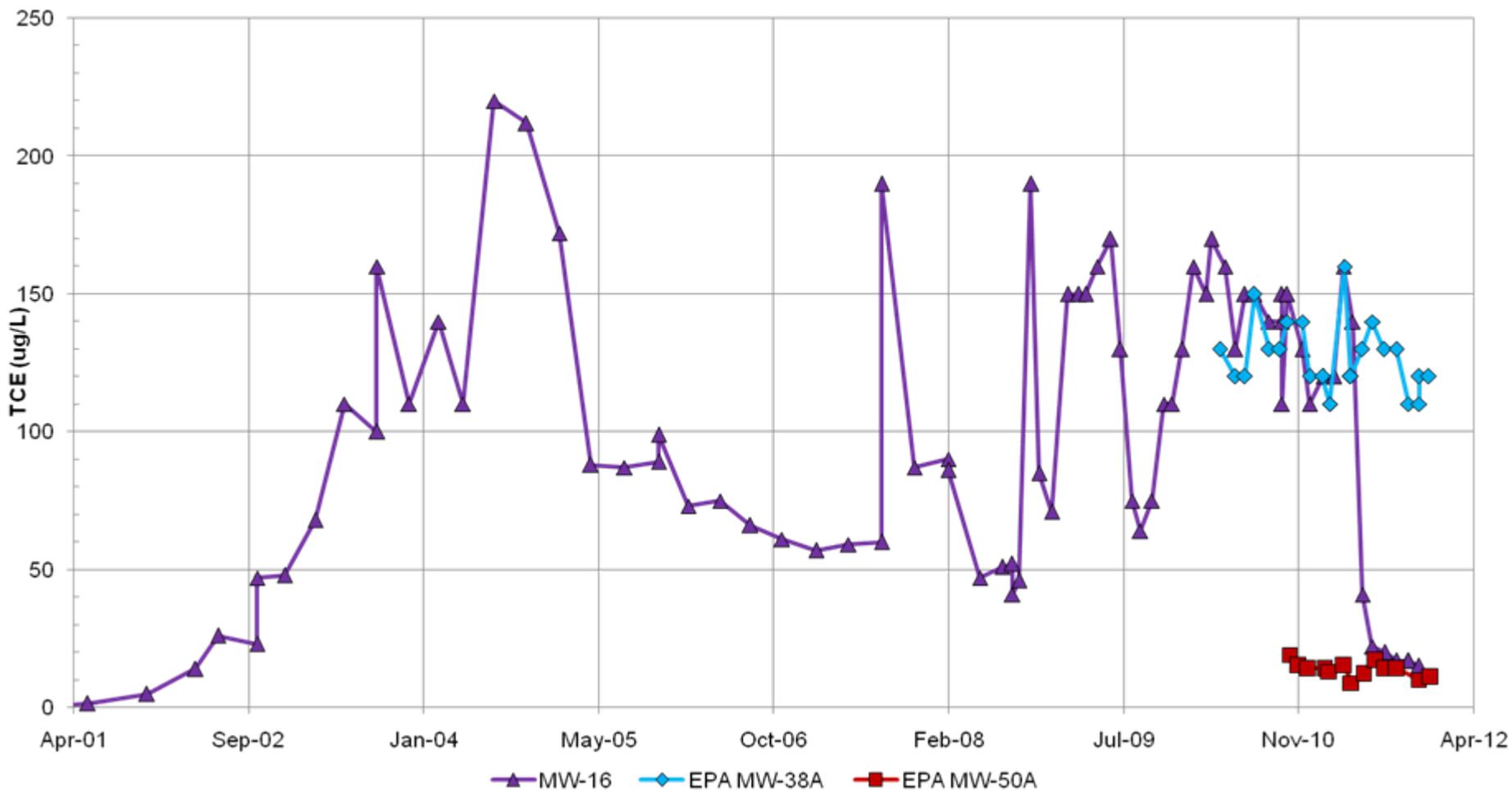
MW-24 = 0.32J $\mu\text{g/L}$



TCE Trends Key NW Area Subunit A Wells Near EA-08



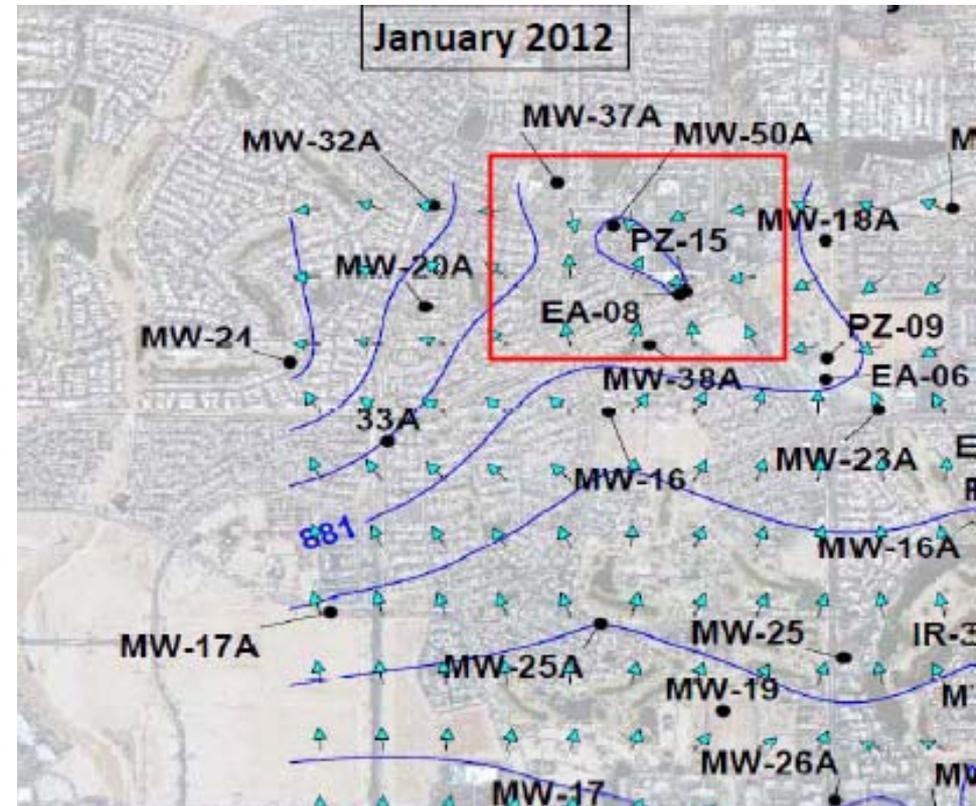
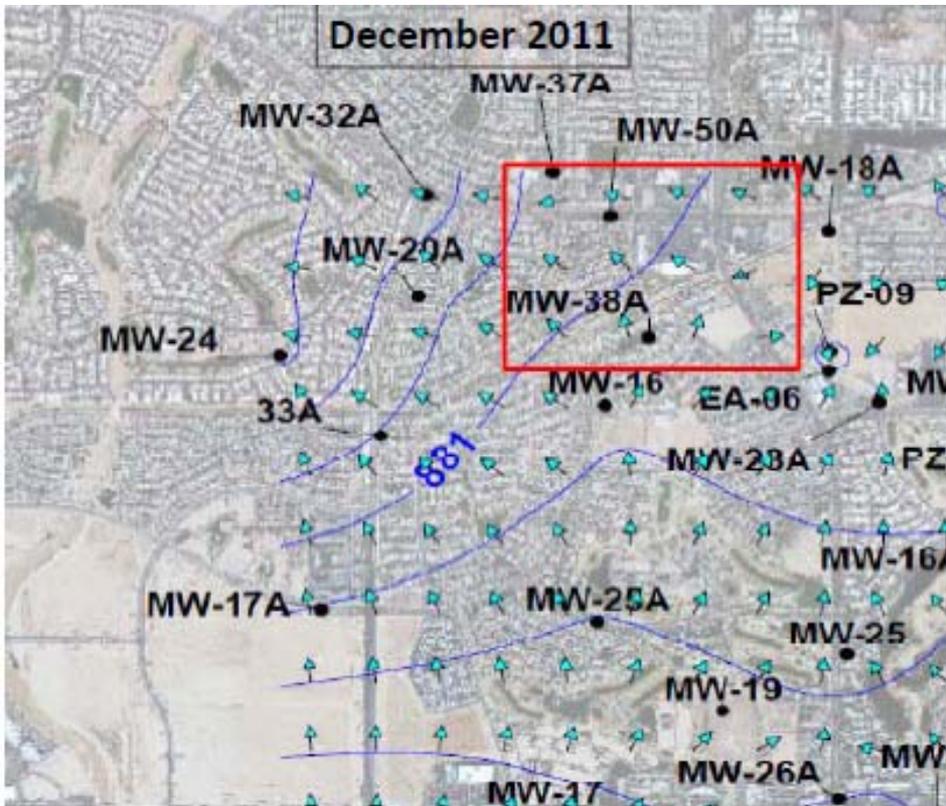
TCE Concentrations EPA MW-50A/EPA MW-38A/MW-16



NW Area Water Levels Near EA-08

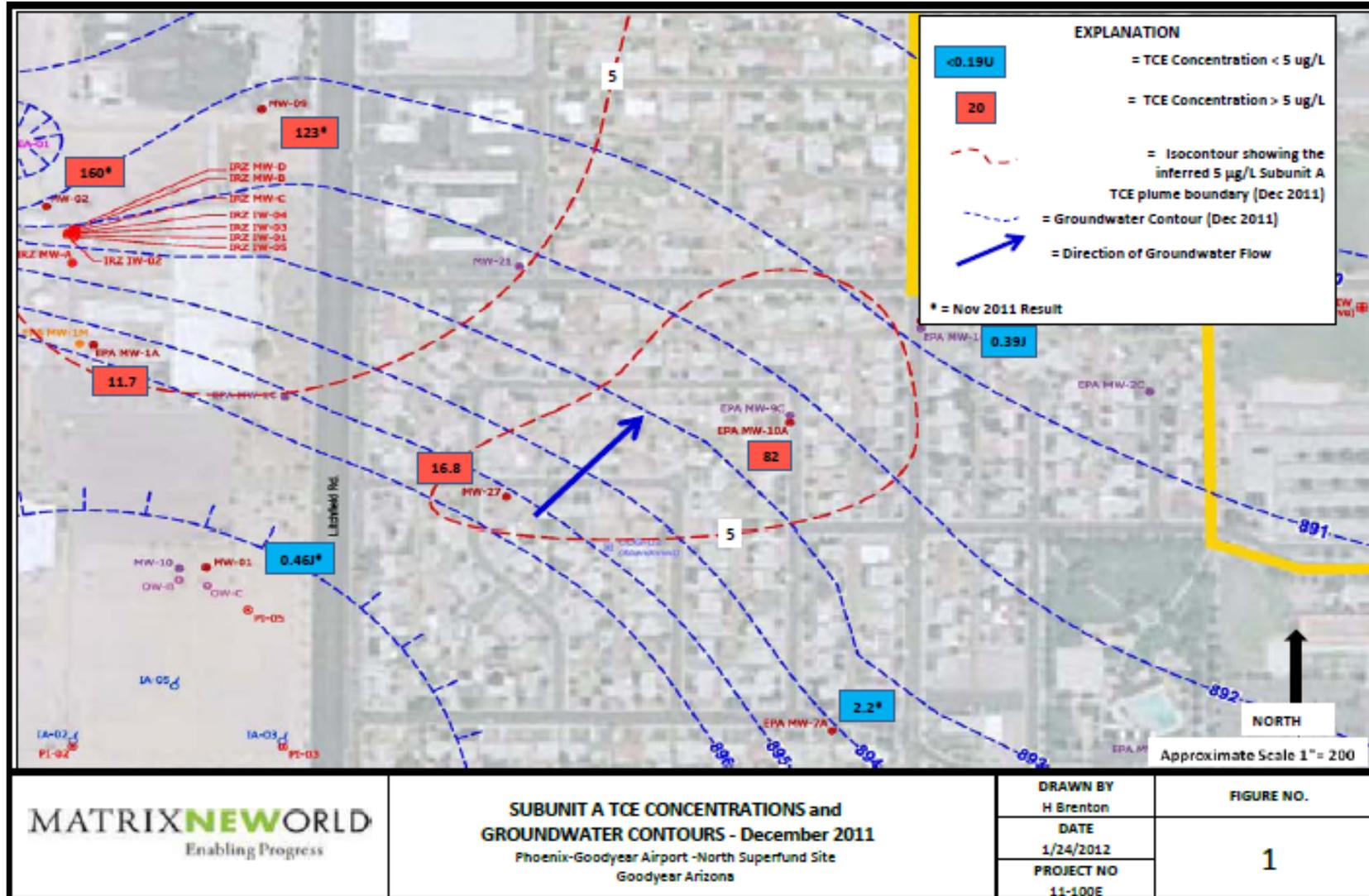
- Extraction at EA-08 has locally changed the groundwater flow fields in the area
- Contours and flow vectors in the area have locally shifted
- Additional monitoring and evaluation is necessary to confirm

Comparison of Dec 2011 and Jan 2012 NW Area Groundwater Flow Direction

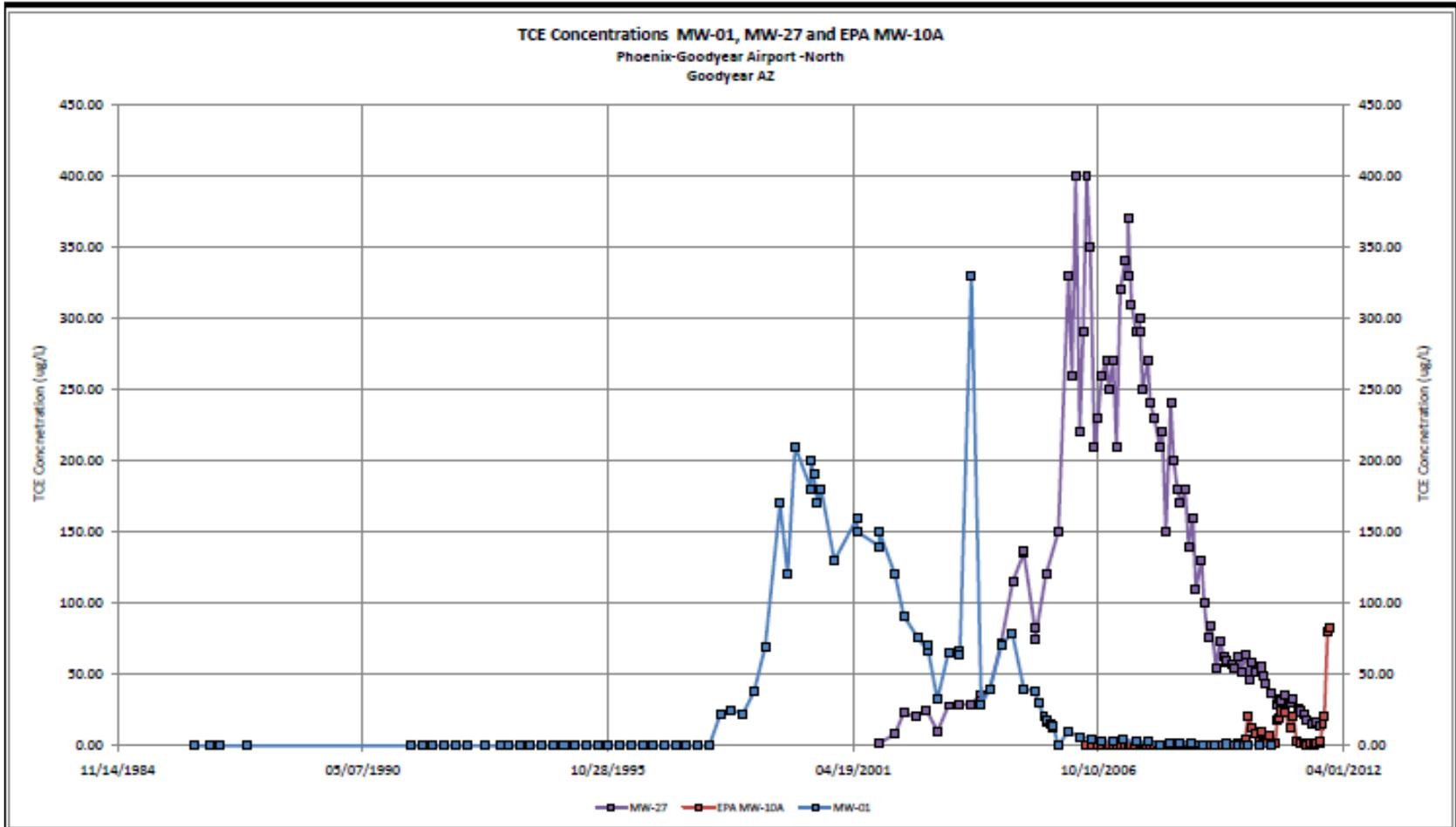


- January 2012 shows a small localized shift in groundwater flow directions near EA-08. For example, flow vectors to the west of EA-08 have shifted toward the NE and flow vectors to the west have shifted more toward the east.
- The 881 ft contour has shifted and is now interpreted to be below MW-38A. The 880 ft contours shows a bulge toward the east more than likely reflecting the cone of depression caused by the pumping of EA-08.

COG-03 Area Update – Subunit A



COG-03 Area Update - Subunit A



MATRIXNEWORLD
Enabling Progress

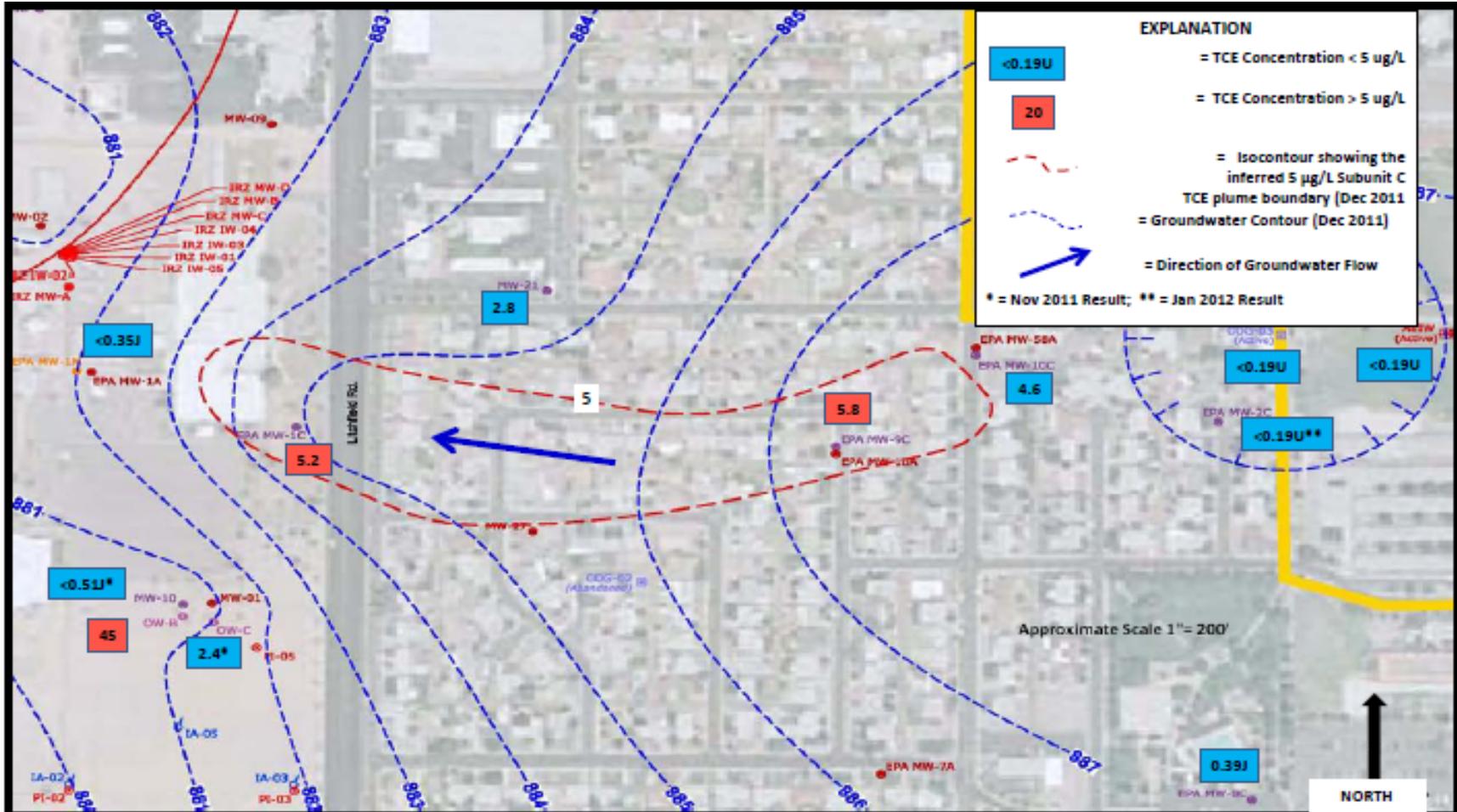
TCE TREND GRAPHS SUBUNIT A- COG-03 Area
Phoenix-Goodyear Airport -North Superfund Site
Goodyear Arizona

DRAWN BY
H Brenton
DATE
1/24/2012
PROJECT NO
11-100E

FIGURE NO.

2

COG-03 Area Update – Subunit C



MATRIXNEWORLD
Enabling Progress

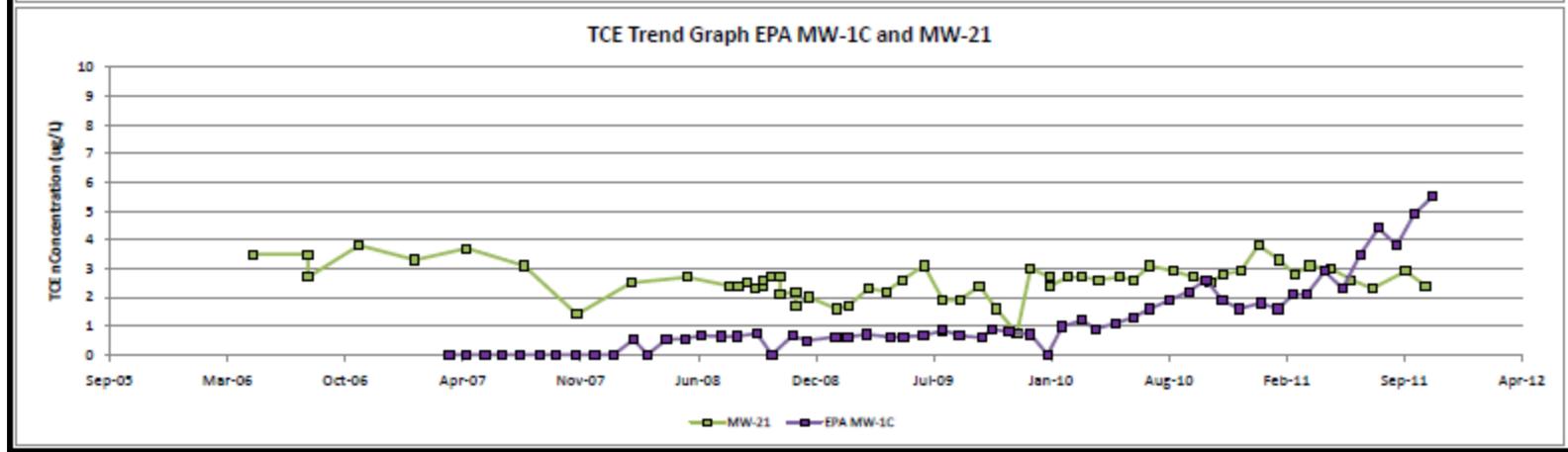
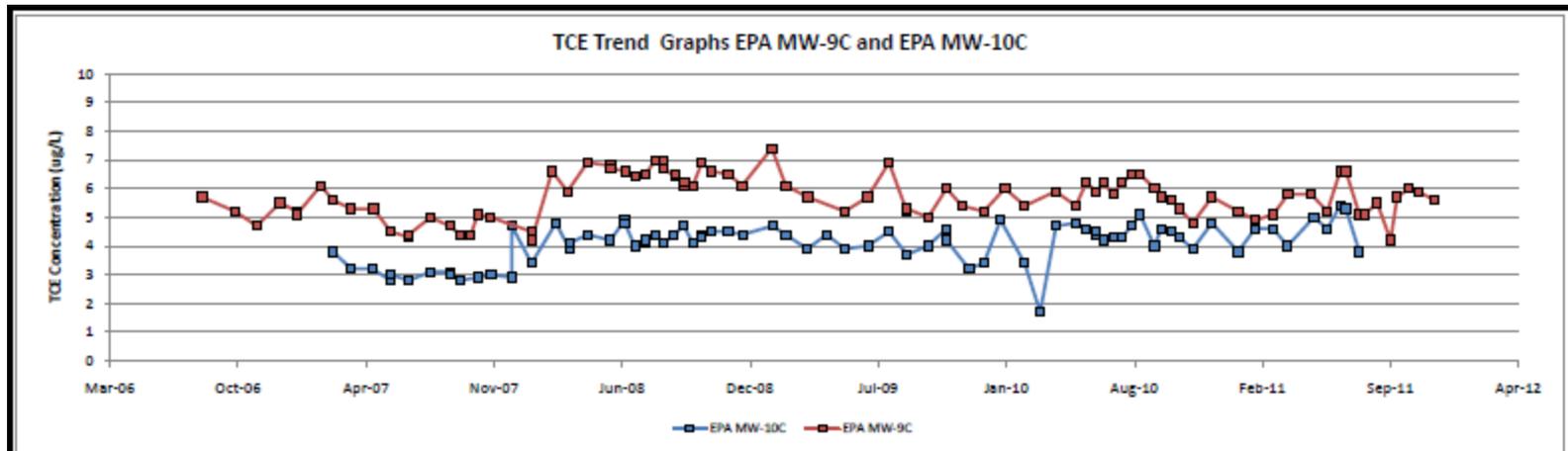
SUBUNIT B/C/MAU TCE CONCENTRATIONS
December 2011
Phoenix-Goodyear Airport -North Superfund Site
Goodyear Arizona

DRAWN BY
H Brenton
DATE
1/24/2012
PROJECT NO
11-100E

FIGURE NO.

3

COG-03 Area Update – Subunit C



MATRIXNEWORLD
Enabling Progress

TCE TREND GRAPHS SUBUNIT C- COG-03 AREA
Phoenix-Goodyear Airport -North Superfund Site
Goodyear Arizona

DRAWN BY
H Brenton
DATE
1/24/2012
PROJECT NO
11-100E

FIGURE NO.

4

- In 2011 we completed 63 individual system enhancements to improve performance and safety;
- Identified using Crane Co Kaizen (TQM) Process
 - 31 upgrades at the MTS
 - 10 upgrades at EA-05
 - 9 upgrades at EA-06
 - 6 upgrades at 33A
 - 7 upgrades at various extraction well or injection well locations

EA-06 Kaizen (TQM)



EA-06 Kaizen (TQM)



EA-06 Kaizen (TQM)





PGA-N System Enhancements



Upcoming Work



- Source Area Focused Feasibility Study
 - Evaluation of source area treatment technologies –
 - Submitted January 19, 2012

- Optimization of Soil Vapor Extraction Treatment System

- Additional Subunit A and Subunit C Monitor wells

- Remediation system expansions

- Possible Site Tour with CAG March or April 2012

QUESTIONS?



Western Avenue WQARF Site





Western Avenue WQARF Site

Delfina Olivarez

**ADEQ Project Manager for the
Western Avenue WQARF Site**

602-771-4710; dco@azdeq.gov

February 9, 2012

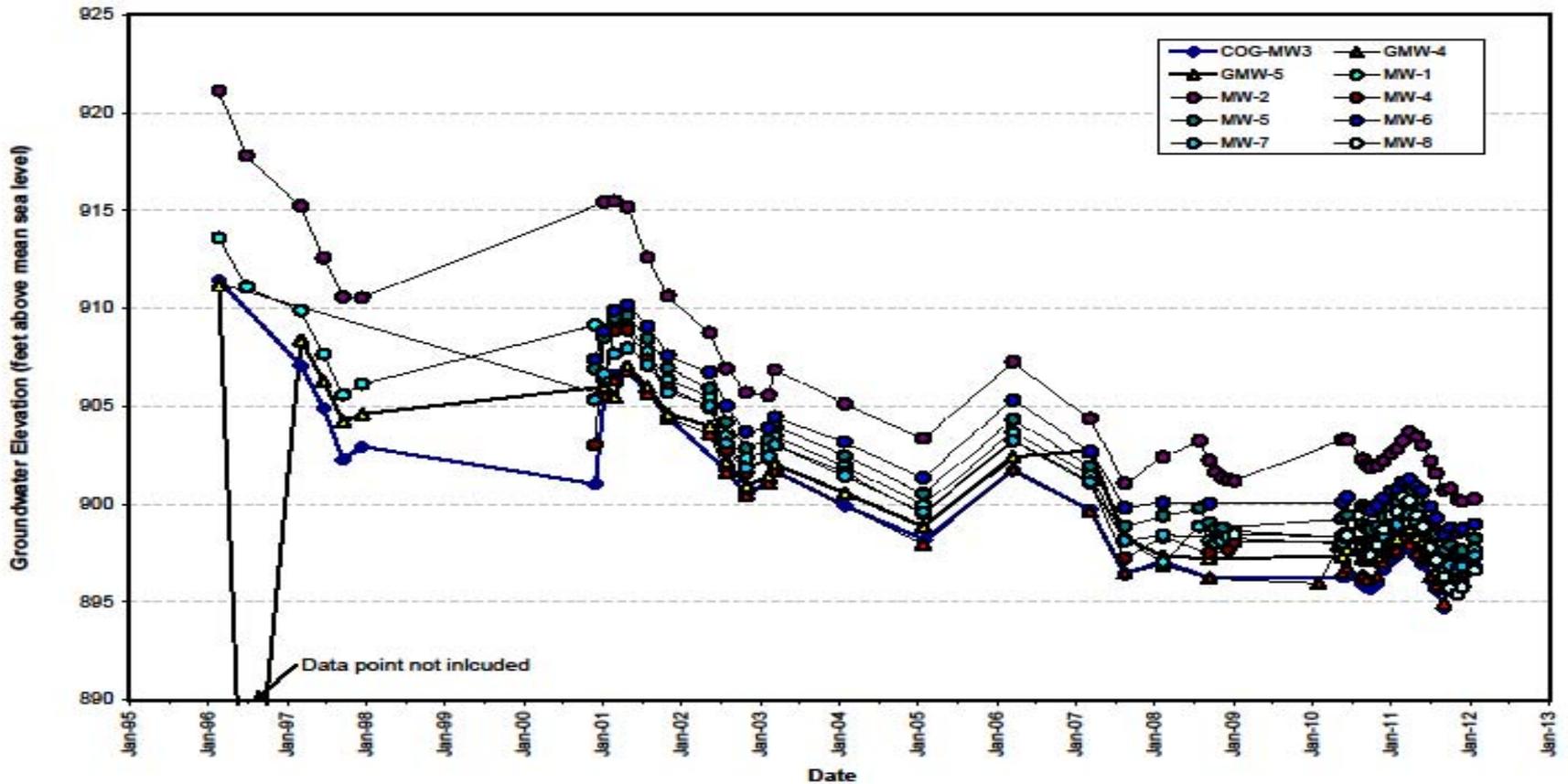
Update on Site Activities

- **Water Level Gauging of the Western Avenue Well Network.**
- **Water Quality Samples of the City of Goodyear Well number one (COG #1).**
- **Water Quality Samples of the Western Avenue Site Wells .**

Water Levels at Western Avenue

- **Overall Water Level is Declining.**
- **Gradient flow is very slow, flat and stable with very little changes.**

Western Avenue WQARF Site

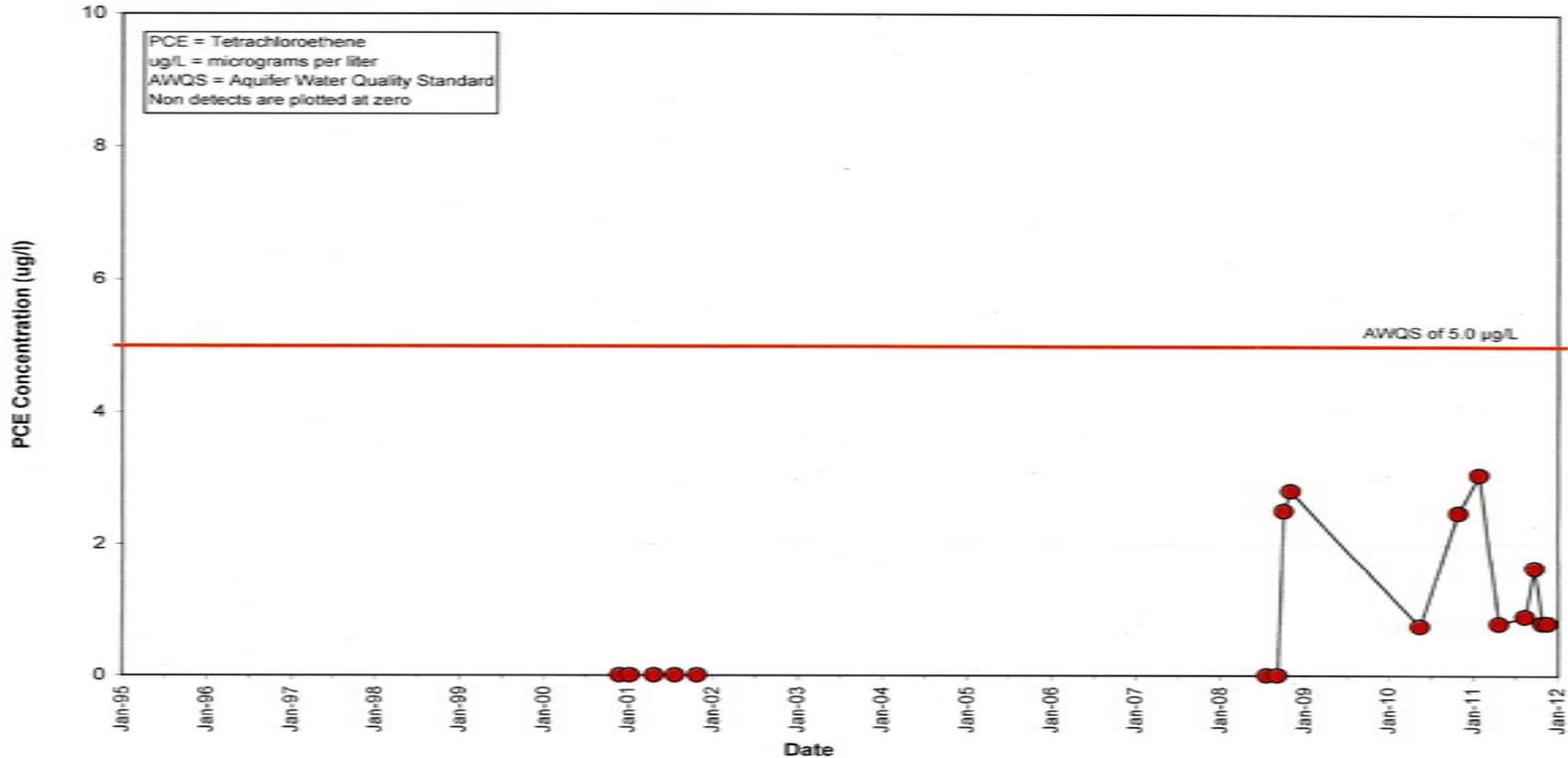


**WESTERN AVENUE WQARF SITE GROUNDWATER ELEVATION
MONITOR WELLS COG-MW3, GMW-4, GMW-5, MW-1, MW-2,
MW-4, MW-5, MW-6, MW-7, and MW-8**

PCE Levels for City of Goodyear Drinking Water Well (COG#1)

- **11/09/11: 0.79 ug/L**
- **12/01/11: 0.79 ug/L**
- **Both less than AWQS of 5 ug/L**

Western Avenue WQARF Site

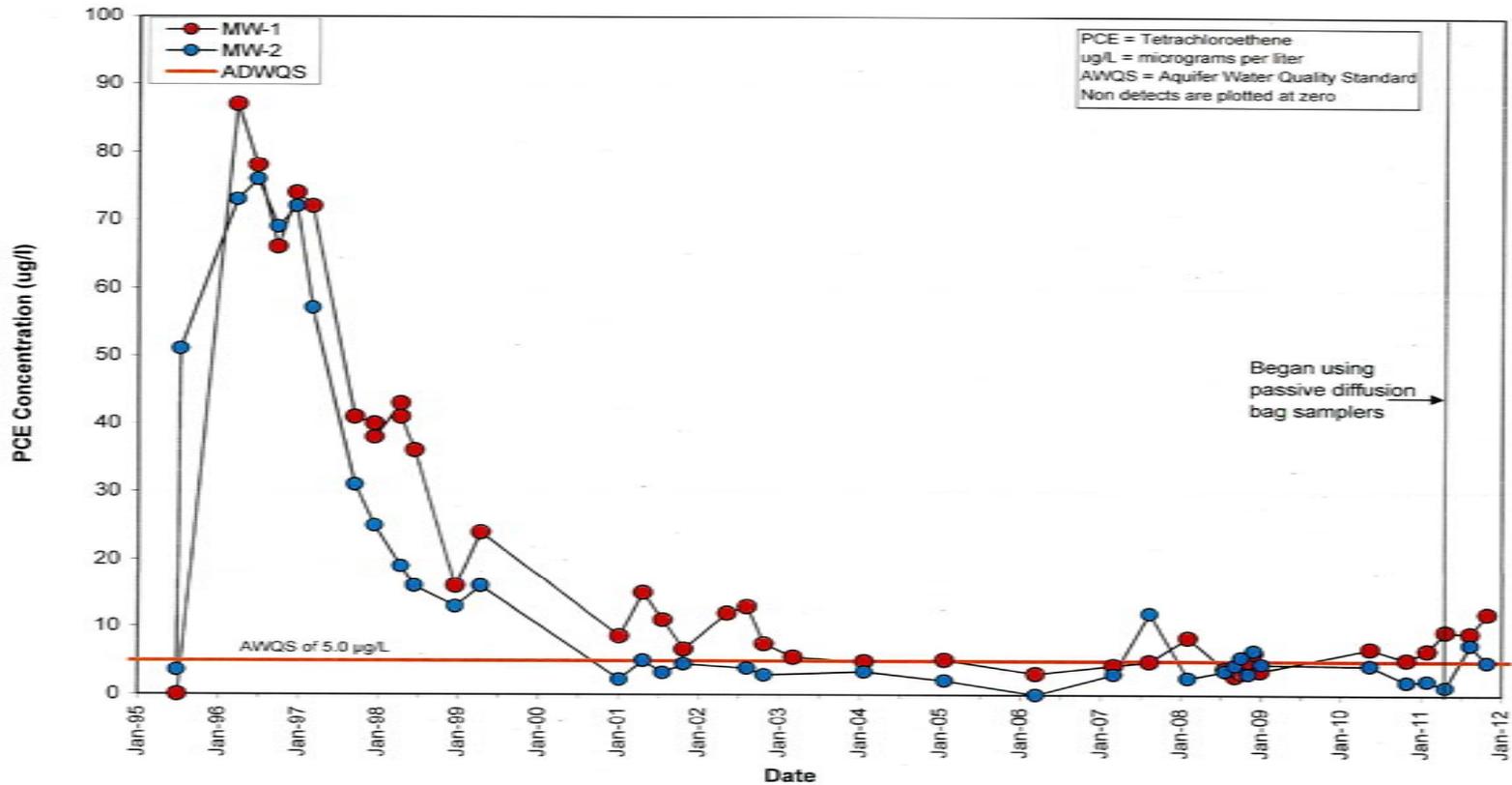


WESTERN AVENUE WQARF SITE
 PCE CONCENTRATIONS
 PRODUCTION WELL COG-1

Western Avenue Wells PCE Sampling Results of November 11, 2011

- **MW-1: 12.0 ug/L**
- **MW-2: 4.87 ug/L**
- **MW-1 exceeded AWQS of 5 ug/L**
- **All other Western Ave. wells were non-detect.**

Western Avenue WQARF Site

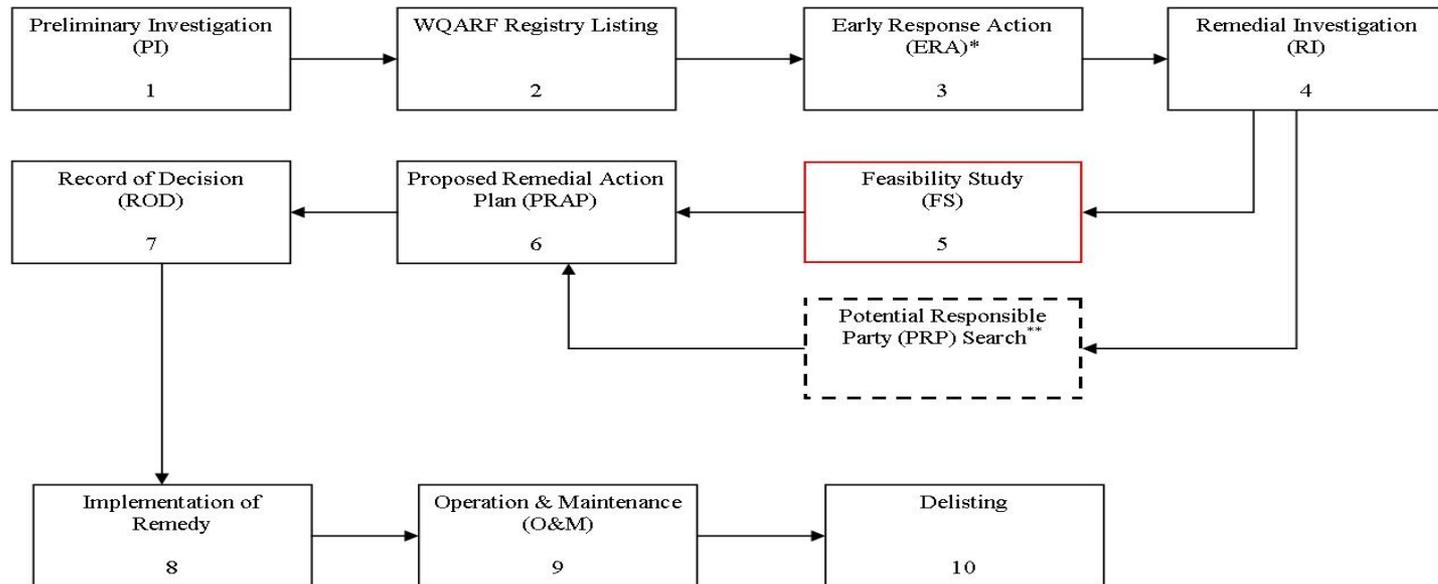


**WESTERN AVENUE WQARF SITE
 PCE CONCENTRATIONS
 MONITOR WELLS MW-1 AND MW-2**

Future of Western Avenue

- **Continue quarterly water quality sampling and water level gauging of Western Avenue Wells and also water quality sampling of COG #1**
- **Draft Feasibility Study Report should be done mid – end of February**

WQARF Phases





Western Avenue WQARF Site

Questions

Thank You,

Delfina Olivarez

Western Avenue Project Manager

602-771-4710, dco@azdeq.gov