MEETING MINUTES

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

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

DRAFT MINUTES

CAG Members in Attendance:
Diane Krone
Lisa Amos
Jeff Raible-Co-chair
David Ellis
Karl Havlicek - Alternate
Frank Scott – Co-chair

ADEQ Staff in Attendance:
Delfina Olivarez, Western Avenue Project Manager
Travis Barnum, PGA North and South Project Manager
Tina LePage, Remedial Projects Section Manager
Andre Chiaradia, Remedial Projects Unit Manager, WQARF Program
Harry Hendler, Federal Projects Unit Manager
Wendy Flood, Community Involvement Coordinator

Facilitator:
Marty Rozelle

EPA Staff in Attendance:
Catherine Brown
Glen Bruck
Dana Barton
Claire Trombadore

Others in Attendance:
Ailiang Gu, ITSI Gilbane; Nancy Nesky, ITSI Gilbane; Nimisha Patel, AMEC; Joe Husband, Phoenix-Goodyear Airport; Julie Riemenschneider, COP; Harry Brenton, Matrix New World Engineering; Pat Hunnewell, Matrix New World; Stephanie Lyn Koehne, AMEC Geomatrix Inc; Jeff Sussman, Goodyear Tire & Rubber Company; Steve Bordenkircher, Goodyear Tire & Rubber Company; Amy Wilson, TRC; Jim Creedon, Crane Company for City of Litchfield Park; Randy McElroy and Nadine Johnson, ECO/TA, Sandra Rode, City of Goodyear; Mark Holmes, City of Goodyear; Ron Clark, Goodyear Tire & Rubber Company; Brian Waggle, Hargis+Associates, Inc.; Michael R. Long, Hargis+Associates, Inc.; Pete Teiche, New Land Company; Denise Moreno-VA-SRP; Sarah Wilkenson, VA-SRP; Geno Mammin, Clear Creek Associates, Pamela Bir; Mary Moore; Chris Legg; Brown & Caldwell; Walter & Jacob Bouchard

CAG Business

Welcome and Introductions – Ms. Wendy Flood started the meeting and introduced herself as the new Community Involvement Coordinator. Introductions were made by CAG members and audience.

Acceptance and/or changes to minutes of August 2, 2012 -A comment was made from a CAG member regarding the content of the minutes that they were too general. Ms. Flood explained the reasoning behind the format of the minutes. She commented that the meeting is recorded so there is a record of the specific discussion. Ms. Flood was asked to see if the recording could be added to the ADEQ web site and /or put on a disk. Co-chair moved to table the acceptance of the minutes until next meeting and to have them rewritten.

The Open Meeting Law, Charter and Facilitator - Clarifications and examples were provided as to what is "allowed" and "not allowed" regarding communication between board members and the possibility of using a conduit (ADEQ Community Involvement Coordinator (CIC)) for distribution of items and relaying agenda item topics to co-chairs. ADEQ will send out a disclaimer that CAG members can use on their email messages.

Proposed changes to the Charter were handed out by ADEQ and the reasoning for the changes and updates were explained. Changes were suggested with regard to EPA involvement and inclusion in the overall charter language. A motion to form a sub-committee unanimously accepted, which will rework the charter document and bring recommendations to the next CAG meeting. The sub-committee members include Jeff Raible, Diane Krone, Lisa Amos, ADEQ CIC and EPA CIC. It was commented that anyone wishing to include recommendations or modifications should send them to ADEQ CIC for compilation and distribution to CAG members. ADEQ CIC will forward to CAG members and EPA CIC the Statute requirements and guidelines required for the Charter. The Facilitator discussion will continue next meeting since it is part of the charter.

Community Involvement Plan (CIP) – Ms. Dana Barton, EPA, provided an update on the community involvement plan to CAG members and described the requirements for a CIP at the PGA site. Ms. Barton stated the idea of one group is ideal. A draft will be brought to the CAG and the TAG to review and comment.

A CAG member commented that in the past EPA produced a pamphlet on the project status and feedback was provided by the community regarding those pamphlets. Once the pamphlets were discontinued the CAG quit getting feedback. Ms. Barton stated that frequency of fact sheet is a topic covered in the CIP as well as the different roles and what is being done for community involvement. The EPA said that they are no longer producing or sending them out and there was never a consistent distribution timeline. It was also explained that the driver behind the pamphlets was significant work being done at the two sites and the need to disseminate such to the community. The EPA indicated it will be considered for the CIP.

Follow Up Discussion and CAG Questions on the Area Between the Sites Presentation – Ms. Catherine Brown from EPA and Dr. Ailiang Gu of ITSI, EPA's Consultant Presenter, were available for the CAG members to ask questions from last meetings presentation. Ms. Brown reminded the group the purpose of the study, which was generated out of the last Five-Year Review (FYR). Ms. Brown stated the FYR looked at the remedies for North and South and decided whether the activities going on will still be effective.

In 2010 as part of that process, EPA identified issues that involved PGA South and North (PGAS, PGAN). The larger issue being the lack of understanding of what was going on in the area between the two sites due to the sites using different survey data.

A CAG member asked if the purpose was to find where the PCE was coming from. Ms. Brown stated that ADEQ was responsible for investigating the distribution of PCE in the area and the EPA was responsible for identifying where the PCE has been detected relative to the treatment system and the City of Goodyear wells. The EPA determined that the work did not have a conclusive finding regarding the sources of PCE.

Dr. Gu also explained that the important finding from the investigation is the determination that the Subunit C plumes at PGAN and PGAS do not commingle. Ms. Brown also indicated that a very important part of the Area Between the Sites study was whether or not the plumes from PGAN and PGAS will comingle in Subunit C. Through multiple lines of evidence, including water levels, direction of flow, and the characterization of the geochemical conditions in Subunit A versus Subunit C, it was determined that they are not.

A CAG member asked if they could have discovered another unknown source of contaminant that did not belong to either responsible party. The EPA said it was highly unlikely. The difficulty with PCE is that the real sources of the PCE were never definitively determined. That would be the purpose of ADEQ's investigation.

A CAG member asked about the status of determining unknown conduit wells. Dr. Gu explained that the data collected for the geochemical analysis was used to evaluate the potential for existing wells acting as conduit wells. These data show that one well in the area is acting as a conduit well, but it is in an area where VOCs do not exist in Subunit A. Therefore, it is not acting as a conduit for VOCs and not a concern at this point.

A CAG member asked, if there is not a linkage between the two, what is the role of the study's findings as we move forward. The EPA answered it is important because they can now map groundwater in Subunits A and C for all three sites. They did not have this information throughout the investigations. It was also asked if the model would include all three sites and the EPA answered yes. Ms. Brown also commented that the tech memo is still not final and it will include an executive summary written by the EPA, with some conclusions.

During the Call to Public section an audience member asked when the combined map will be available and the date of the data used. The EPA responded that the Area Between the Sites Tech Memo used four quarters (August and November 2011, and February and May of 2012) and would also include a map.

Source Area Remediation Focused Feasibility Study Status - The EPA stated that its top priority at this time is the Focused Feasibility Study for the source area at Unidynamics (PGAN). It was explained that in the process of reviewing the submittal from Crane, EPA/ADEQ reached an important decision to make a change to the remedy at the source area which will require a record of decision (ROD) amendment. In the amendment process the EPA will propose to change the remedy which will go out for public comment and, a public meeting will be held to discuss the preferred alternatives, hopefully in the 1st Quarter 2013 calendar year; It is a priority for EPA. The Technical Assistance Grant (TAG) advisory commented that there should be a TAG meeting in February around the time of the release of the ROD amendment. Ms. Brown

stated the dispute was resolved with Crane and there is currently an agreement regarding time spent on data review and progress at the site.

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

Ms. Delfina Olivarez, ADEQ Project Manager for Western Avenue, gave a quarterly update on groundwater monitoring, Feasibility Study Work Plan update, and a work plan to investigate City of Goodyear well number 1 (COG -01) . She also presented a handout out of the timeline of work performed at Western Ave and a CD of the Feasibility Work Plan.

See slide presentation below

In response to CAG member questions, ADEQ described the plan and its primary purpose: determine, even though PCE concentrations have been historically below the Arizona Aquifer Water Quality Standards (AWQS), that PCE concentrations in COG-01 spike on occasion.

A CAG member asked if ADEQ has evaluated the area between the sites and drawn any conclusions. The ADEQ understands information from the study states that PCE found in PGA South is associated with the Western Avenue Site, but there is inconclusive evidence that the PCE in PGA north is associated with the Western Avenue Site. ADEQ and Dr.Gu stated that they have not discovered a definite source and that is why there is no potential responsible party.

A CAG member asked about COG-3. The ADEQ and EPA said that the source was never characterized or identified, so the PCE in the vicinity of the project area cannot be attributed to a source.

A CAG member asked if the accepted level results were based upon continuous monitoring or sampling. The ADEQ said that the well is sampled quarterly. The CAG member asked if the levels could change without their knowledge during the period when the well was not sampled and he also asked if there is an alarm system to warn the City of Goodyear to not utilize the well during that time. ADEQ answered that if concentrations increase the wells are re-sampled and the City of Goodyear is notified. For the May event, once higher concentrations were discovered re-sampling took place and a different lab was used to analyze the results, which were then provided to the City of Goodyear. The ADEQ reaffirmed that if the concentrations ever exceeded the AWQS the City of Goodyear would be informed immediately.

A CAG member stated that he had some research on other sites where the contamination had been detected but not fully characterized. Later the contamination became a serious problem. The member provided the report to the CAG to read.

See Article Below

An audience member asked if the reporting limits from the different labs can be made available or might the CAG have an update on whether the results were the same or different. The ADEQ agreed to provide reporting limits and method detect levels for future meetings. Another audience member asked if the re-sampled well was a drinking well or a monitoring well. The ADEQ said that COG-01 was a drinking water well and is blended and used intermittently.

PGA-South - Jeff Sussman, Goodyear Tire & Rubber Company (GTRC)

Mr. Jeff Sussman gave a quarterly update on groundwater monitoring and update on current and future activities at PGAS.

See slide presentation below

Mr. Sussman introduced Ms. Amy Wilson, Project Manager for TRC, Goodyear Tire & Rubber's Environmental Consultant. Per the CAG's request TRC was invited to discuss Ground Water Modeling efforts.

A CAG member asked if any new wells have been drilled in Subunit A. Mr. Sussman stated that in February 2012, 8 wells that went dry were replaced with 5 new wells. The definition of a dry well does not necessarily mean no water is in the well; it may also mean not enough water to sample. It was also asked whether the 360 micrograms per Liter (µg/l) shown for the August sample was from one of the new wells installed. Mr. Sussman verified it was and stated new wells were installed virtually in the same location as the previous wells but deeper into the aquifer. Those well concentrations came back higher than wells they had replaced and means there is a little more mass in the lower portion of the Subunit A aquifer. The new wells will be monitored.

Mr. Sussman continued stating that in August, a biotrap mechanism was installed in the monitor well with the highest chromium concentration and will be retrieved for analysis the week of November 12th. It is believed that with different reagents, PCE and chromium, will respond to the baited areas so to see effectively if the reagents are interacting with those chemicals. A non-baited section was also installed as a comparison to see if there is any natural degradation occurring. It is not believed natural degradation is occurring, but it needs to be validated. This data will be used to determine if an in-situ treatment is feasible. This has not been requested but it is important to understand what remedial options GTRC may have. A picture of the biotrap mechanism was displayed.

Mr. Sussman continued saying the chromium is in a small area and it may be useful for an in-situ treatment, as opposed to pumping chromium-laced water. This investigation is part of the longer term strategic plan. GTRC also plans to investigate chromium further yet all of it is depending on off- site access. It is not anticipated to take as long as before to gain access.

Mr. Sussman indicated that the chromium investigation on the only well (E-17) in Subunit C Northern plume has chromium above the standard of 100 µg/l. GTRC does not have very good data down gradient, so they submitted a work plan to the agency to do chromium borings transect to see if the chromium is migrating through or past that point. The start of this work will depend on the approval of the work plan and on-site access to private or commercial properties.

A CAG member expressed concern about a number of wells on the slide presentation that are more than 5 µg/l of TCE and are trending up 10-20% consistently. Mr. Sussman responded they are not concerned since the numbers tend to vary depending on the geography of the plume and these are closer to the source.

Ms. Wilson presented the Groundwater Model, which was the original used for the Remedial Investigation and to achieve capture of the plume. TRC has updated the model with more recent information and has a range of 5 miles by 3 miles. The model needed to reflect updated boundary conditions; pumping rates and recharge; and finally they calibrated certain input parameters. This model is a good tool to optimize remedial activities.

A CAG member asked since the area-between-the sites data is a comprehensive model and this model just presented is specific for PGAS, is there any validation or comparison of the models. Mr. Sussman responded that it wouldn't be comparable since it is focused in a smaller area with more compact data and longer data sets for validation.

Mr. Sussman stated that it would give a unique ability to look over a 20 year period to see if the model is predicting what has happened. This model starts back in time and brings the model up to see if it reflects current conditions.

The EPA pointed out that the original model was developed for EPA and it was the first application of that particular model at a Superfund site. At that time it was forward thinking and EPA was looking for validation of the model.

ADEQ asked about contingency plans if access is not granted for the proposed Subunit C monitoring wells. Mr. Sussman responded that if needed they would get the agencies involved but feels confident it won't be needed.

An audience member asked if they will present input parameters used in the model and asked whether the two new proposed wells will be drilled simultaneously or separately. Mr. Sussman responded they could share the information but the model is highly scientific and gets very complicated very quickly. It is best to be specific on what to present and the CAG will have to make that decision. Regarding the well installation, he indicated that they would rather be efficient and drill both wells at the same time but if they get access to one they don't want to delay the process by waiting for the other.

PGA-North Activities –Stephanie Lyn Koehne, AMEC Geomatrix, Inc., Project Manager and Harry Brenton, Project Hydrogeologist, MatrixNeworld, Inc.

PGAN consultants provided a quarterly update on groundwater monitoring, current and future activities, and 5-year plan for the site.

See slide presentation below

A CAG member asked how they determine their final calculation of removal and how accurate is the estimate.

AMEC responded that concentration of TCE in the pumped groundwater and the total pumping rate are measured, then the total mass of TCE removed is calculated and the calculation is within 10% or better.

A CAG member wanted to confirm that EA-08 was not currently pumping. AMEC responded that the RID does maintenance on the canal the first part of November and there is no pumping now. A CAG member asked if monitor well EPA-MW-51A was now operational. AMEC responded that they have collected one sample from that well and it contained a concentration of 4 ppb.

A CAG member asked about the result in MW-51A. It was hoped to have non-detects in that area. The question is, given the result is the plan still for injection in that area to control the plume. AMEC responded yes, that it is a part of their Northwest injection work plan. They don't want to inject where they have contamination. They only have one data point from monitor well MW-51A and the northwest injection work plan will include some piezometers and additional monitor wells to give them a better understanding if any TCE is in that area. AMEC said that Jerry Yonkers of the HOA made a request for quarterly reports to be submitted to the HOA, which will be provided. AMEC also confirmed that most of the wells are monitored monthly with a few on a quarterly basis; a few by COG-3 are sampled twice a month. The work plan may have to be modified depending on the findings. AMEC confirmed that, per the consent decree, if they get 3 results above 5, they have to drill another well to determine the extent.

A CAG member asked about the patch of rye growing. AMEC stated there is about 11 acres that a local farmer grows seasonally; rye and alfalfa. It is primarily a beautification item but it helps to keep the dust down. It was not required, PGAN chose to do it.

Ms. Brown commented about containment to the northeast, EPA was waiting for the capture zone analysis which came in October 2012. EPA is waiting to review to make a capture decision based on review of that analysis.

Call to the Public

Regarding Minutes – An audience member commented that those not attending the meetings would be less likely to know who a question comes from than the people who are writing the minutes and asked that the CAG members identify themselves for the audio. The same audience member asked if the audio would be available on the website with a link or if the public has to request the file. She also said that it is difficult for the community to receive an audio version because of the request, payment and pick up process. It would be easier for them if it could be a link on a website accessible to the public.

Regarding PGA South - An audience member asked if the chromium concentrations discussed were total chromium and, if so, how much of that was hexavalent chromium. GTRC said the chromium is primarily hexavalent chromium.

Regarding Western Avenue – An audience member asked if the final Feasibility Study will be posted for the public to read. The ADEQ said the Final Feasibility Study will be available for public review and comment. An audience member commented that it was troubling that the site was not characterized and asked what ADEQ is doing to ensure that other sites are properly characterized. ADEQ responded that characterization of the plume, which determines the vertical and horizontal extent, has been accomplished. When the statement was made that the site was not characterized, it was with respect to the source of the PCE, not the extent of contamination. The purpose of the Feasibility Study is to determine the most efficient way of remediating the contamination.

Future Meeting Agenda Discussion

The next CAG meeting will be held on Thursday, February 7th, 2013 beginning at 6:00 p.m. at the Goodyear City Hall. Action items included:

1. Incorporating more information into future minutes.
2. ADEQ to provide link to audio on ADEQ website (or provide CDs to all CAG members for their reference).
3. Send CAG members disclaimer for email correspondence.
4. Organization of Charter sub-group (comprised of Jeff Raible, Diane Krone, Lisa Amos, Wendy Flood and Viola Cooper).
5. ADEQ to provide reporting limits and method detects levels.
6. ADEQ to continue monthly updates (summary) to CAG members.
7. Ensure PGAN updates have all CAG members listed as well as for PGAS.
8. PGAN additional data for wells drilled in the northwest

Adjournment

Suggestions were made to change to a venue closer to PGAN for the next meeting to aid in increasing attendance. A few suggestions were Estrella Mountain Community College or the Pebble Creek club house. The CAG agreed. The next meeting date is February 7th

Western Avenue WQARF Site

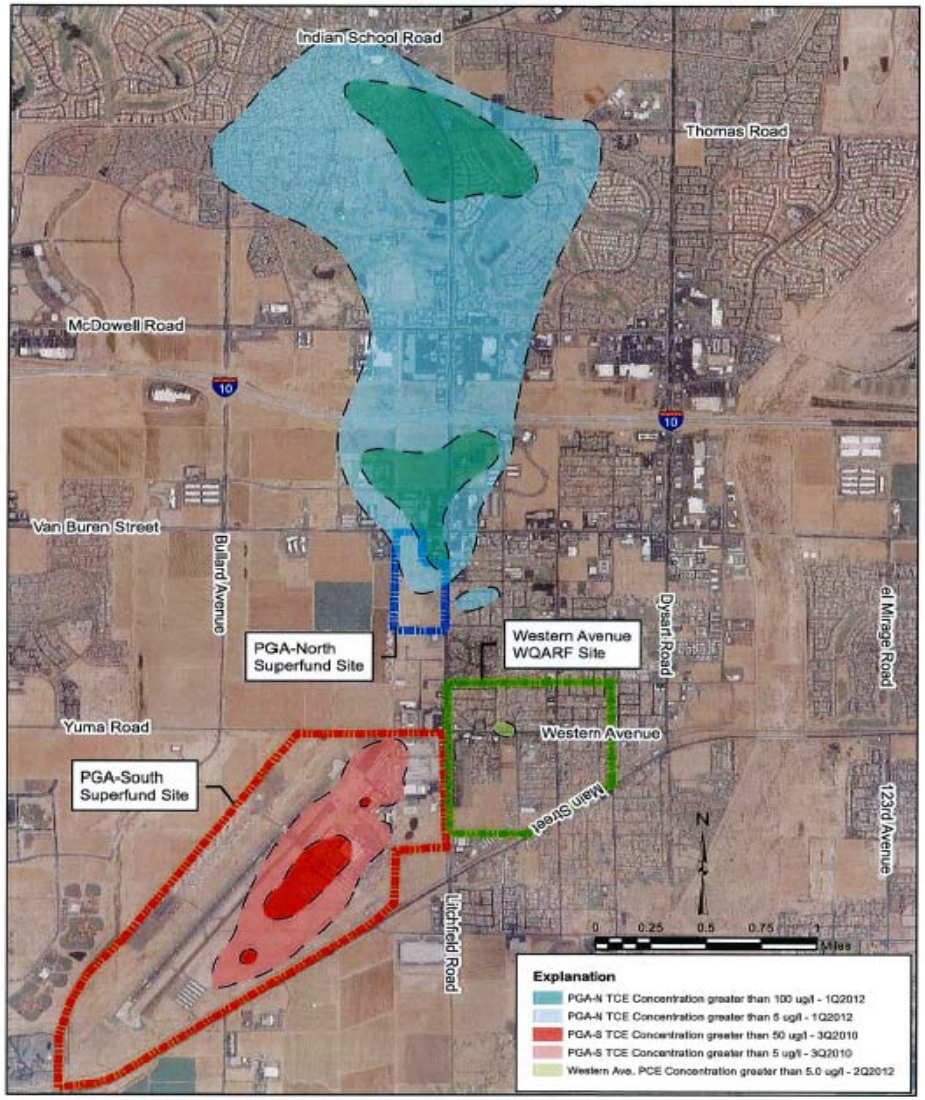
Western Avenue/Phoenix Goodyear Airport

CAG Meeting of November 8, 2012

Delfina Olivarez

ADEQ Arizona Department of Environmental Quality

Western Avenue & PGA Plumes



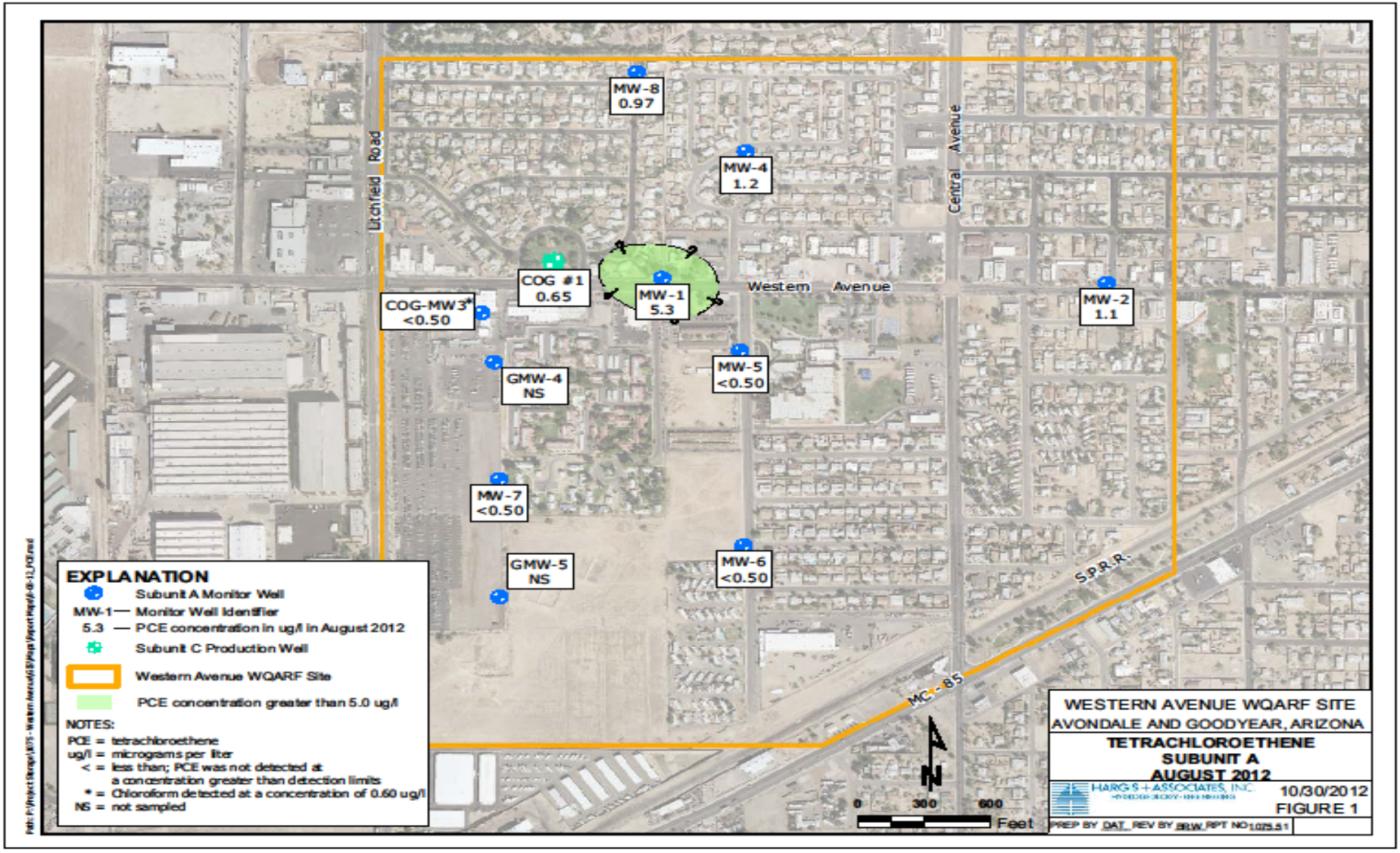
PHOENIX-GOODYEAR AIRPORT (PGA) AREA SITES SUBUNIT A PLUMES

Western Avenue WQARF Site

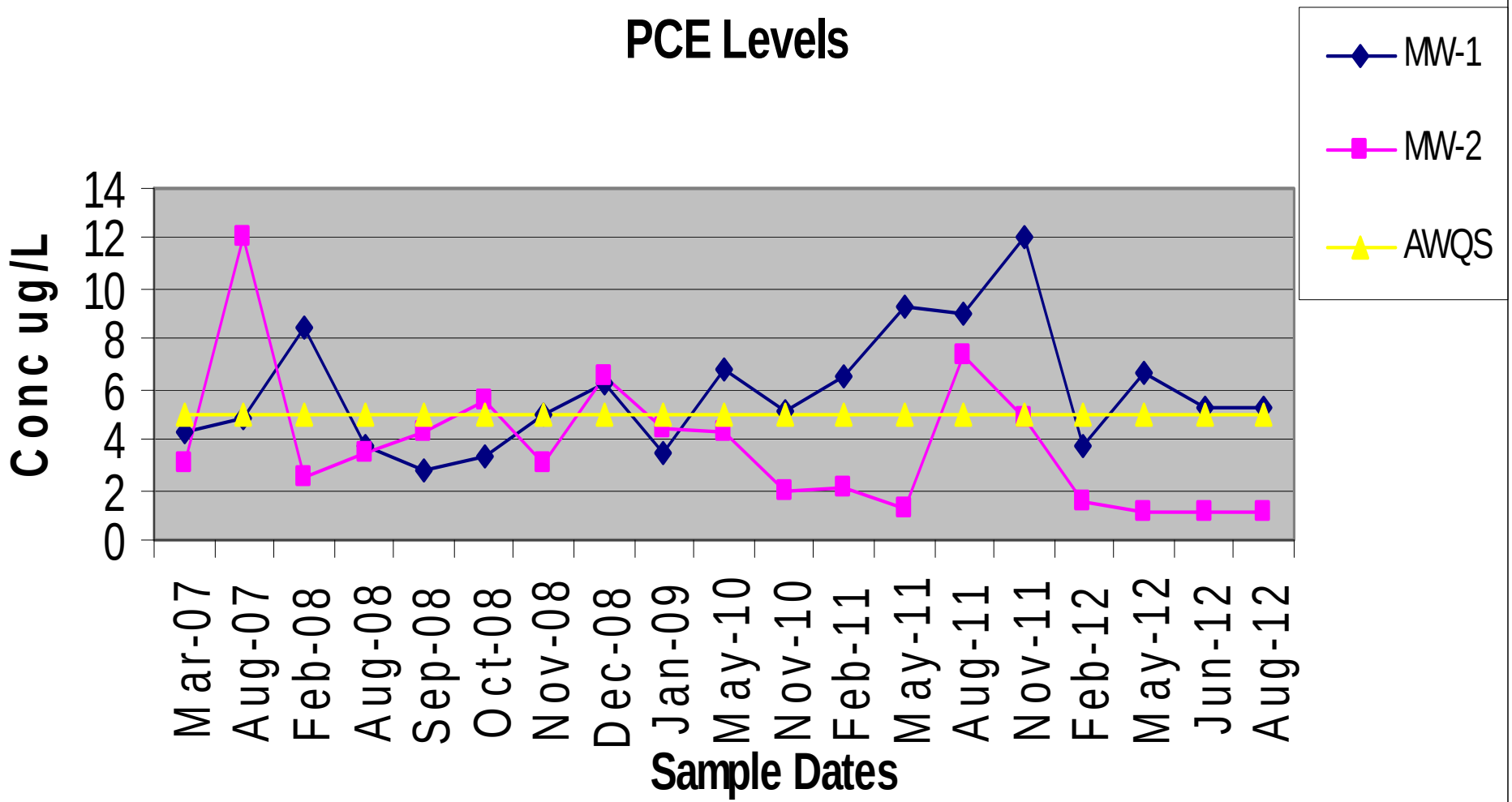
Update on Site Activities

- Groundwater Quality sampling results from the Western Avenue Monitoring Wells
- Groundwater Quality sampling results from the COG #1
- Final Feasibility Study Work Plan
- Draft Study of the City of Goodyear well #1 (COG #1) work plan

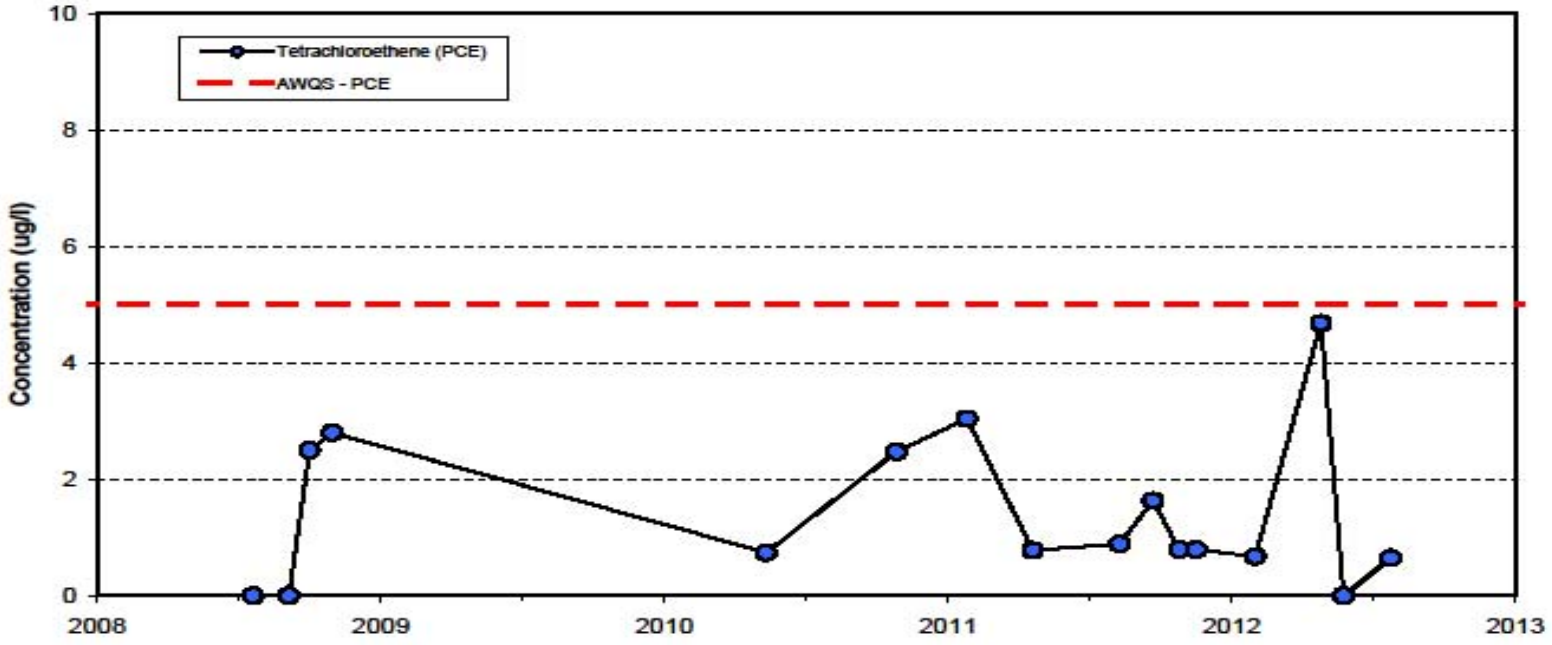
Western Avenue WQARF Site



Western Avenue WQARF Site



Western Avenue WQARF Site



WESTERN AVENUE WQARF SITE
PCE CONCENTRATIONS
PRODUCTION WELL COG-1
2008 - PRESENT

Notes:
ug/L = micrograms per liter
AWQS = Aquifer Water Quality Standard
Non detects are plotted at zero

HARGIS + ASSOCIATES, INC
HYDROGEOLOGY - ENGINEERING

Western Avenue WQARF Sites

Upcoming Activities at Western Avenue

- **The study of COG #1 work plan submitted to the City of Goodyear for review.**

- **Next quarterly monitoring event, including water quality sampling and water level gauging of the 8 Western Avenue Wells and COG-1 will be November 20, 2012.**

Upcoming Activities at Western Avenue

- Feasibility Study WP submitted and approved
- Fulfill remedial objectives of the site
- Technically efficient and feasible remedy
- Cost effective
- Notify Potential Responsible Parties

Western Avenue WQARF Site

Thank You-Questions

Delfina Olivarez

Western Avenue Project Manager

602-771-4710, dco@azdeq.gov; Wendy Flood Western Avenue Community Involvement Coordinator

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N.C. neighbors aghast to learn drinking water contaminated for years

By Charlotte Huffman WNCN/News-17
Updated 21 hours ago

NBCNews.com

WAKE FOREST, N.C. -- A Wake Forest community is in an uproar after learning the state of North Carolina knew a resident's water had been contaminated with toxic chemicals and failed to alert other residents for more than six years.

"It makes me feel horrible," homeowner Michele Hamilton said of unknowingly giving the toxic water to her kids. "They're the most important things to me."

The EPA called families in the community this past summer, saying their water is contaminated with a cancer-causing chemical called trichloroethylene, or TCE, and to not drink, bathe or cook with the water.

"I remember where we were when we got the phone call - we were on vacation this summer with our family," Hamilton said.

Neighbors Monica Stonefield and Frances Cuda got the same call.

"Of course we were frightened and scared," Stonefield said.

"I was very nervous," Cuda said. "I think anybody would be."

Within days of the calls to homeowners, the EPA set up an emergency command post and placed safe water on their doorsteps regularly. The EPA installed water filters in the homes with contamination levels above the EPA's safety standard. And the EPA called a community meeting to explain what neighbors had been drinking.

Gerald LeBlanc, the head of N.C. State University's Department of Environmental and molecular toxicology, said TCE is a chemical that cleaning industries have used for years to remove grease. It is cheap, highly effective – and very toxic.

"Based upon animal studies, we know that it has the ability to do harm," LeBlanc said.

LeBlanc said TCE "has been known to cause cancer" specifically leukemia, breast cancer, lung cancer, and there are symptoms associated with TCE exposure that are like Parkinson's disease.

Cuda said she has Parkinson's disease. She also said she has gotten cysts, including "a lot of them in this left breast."

Doctors have not confirmed it, but Cuda believes the development of many large cysts in her left breast and having Parkinson's disease is due to TCE.

Cuda said a neighbor died from breast cancer. "And you know, she was a lovely person," Cuda said. "She was in her 50s."

The problem dates back to 10 years ago, where circuit boards were cleaned with the toxin inside a shed on Stony Hill Road in Wake Forest. The TCE exited the building through a pipe and poured straight onto the ground. About three years later, the chemical showed up in a well at the house next door.

"It looked to be that the contamination was confined to that well," Jesneck said.

So in 2005, DENR moved on.

Through a Freedom of Information Act, NBC-17 obtained 800 pages from DENR's files. Inside those pages, NBC-17 found dozens of red flags, including a two-page summary sent from DENR staff to senior managers in 2008 saying, "There are other wells along Stony Hill Road that should be sampled to check their status."

Also in 2008 was a DENR letter, where the department admitted “the extent of the contamination has not been defined.”

Larry Kusan is an engineer and resident living near the contamination. In 2008, he learned about the contamination that happened in 2005 and was concerned about the potential for the contamination to spread.

“I wanted to make sure that my family wasn’t in trouble,” Kusan said in an interview. “Our home is about a mile away from that location.”

Kusan said he was “shocked” by what he found.

He wrote DENR and the governor’s office, saying, “The area is slated for significant expansion.”

He noted, “It is the cost to human health that is of greatest concern.”

He then demanded the situation be addressed, or said, “It will result in harm to some residents, current and future.”

DENR admits those warning sat in their files for years because they were focused on “bigger issues.”

Kusan called that a “missed opportunity.”

While the contamination problem brewed underground the area became a popular residential community with several new housing developments.

One resident, Stonefield, said, “We moved here to make a better life for our family.”

Asked if DENR ever notified them of concerns, Stonefield said, “Never.”

Cuda, too, couldn’t remember any official notices about the problem.

Environmental engineer Jim Halley said it is reasonable to assume TCE will spread. TCE sinks because it is heavier than water and when it sinks into the groundwater it spreads through the water table and into nearby wells.

“And that’s when we really start seeing problems with groundwater and drinking water contamination,” Halley said.

DENR’s Jesneck, asked about TCE sinking and spreading, said, “There were higher risk sites on the radar at that time,” and they hoped it wouldn’t spread.

The first time many neighbors learned of the contamination was this past June when DENR sent some neighbors a letter asking if they would like to have their wells sampled.

“That’s not good enough,” Frank Cuda said. “You bring someone up in uniform, in a vehicle that you know represents them who says, ‘Excuse me. There is an emergency. I need to test your water.’”

DENR called in the EPA for help.

More from News-17: Cleaning up toxic mess will cost taxpayers

By late August, the EPA had sampled about 100 wells. They found the TCE contamination had spread from the source nearly 500 acres and contaminated the wells of 21 families in the area.

Mark Stonefield’s well tested positive for dangerous levels of TCE contamination.

“I’m furious,” homeowner Stonefield said. “I’m very upset about it. That’s the biggest problem I’ve had with this whole situation is the state knew about it in 2005. We bought this land in 2007 and built a house on it in 2008 and

our kids have been drinking the water for over 4 years now and no one notified us there was even the possibility that the water could be contaminated."

Jesneck said, "We have a finite number of resources."

NBC-17 pointed out that it does not require any money to call residents and alert them about potential contamination in the area.

"If we had all the resources in the world, it would be a fantastic thing to do," Jesneck said. "But given the resources we are given, we have to work on the highest risk known problems first."

Jesneck added, "We had sites where people actually had detections in their water supply wells or living on contaminated soils. Those are higher priorities than people living near a contaminated site."

But in the Wake Forest community, that answer is not good enough.

"I don't care about funding," said Cuda. "All I care about is that someone starts doing their job in the world!"

Cuda pointed out that he drank the water daily for years.

More from Open Channel:

- Plane truth: Millions spent on rarely used Gary, Ind., airport
- Feds investigate phony letters telling Fla. voters they're not eligible to vote
- 'Cash register justice'; private probation services face legal counterattack
- Sunni radicals target Shiites to fan sectarian flames in Pakistan
- Unstoppable hackers take out bank websites with next-gen 'botnets'
- Ex-CIA agent pleads guilty to leaking identity of covert operative
- 'Hurricane tort king' wires another $1 million to pro-Obama Super PAC
- Tracking secretive opponent of Montana campaign finance laws
- To fight obesity, WHO agency partners with soft drink, snack makers
- Child sex abuse survivor on release of Boy Scout files: This 'empowers us'
- US nonprofit 'names and shames' businesses to put bite into Iran sanctions

Phoenix Goodyear Airport-South Project Site Status Report

Community Advisory Group Meeting

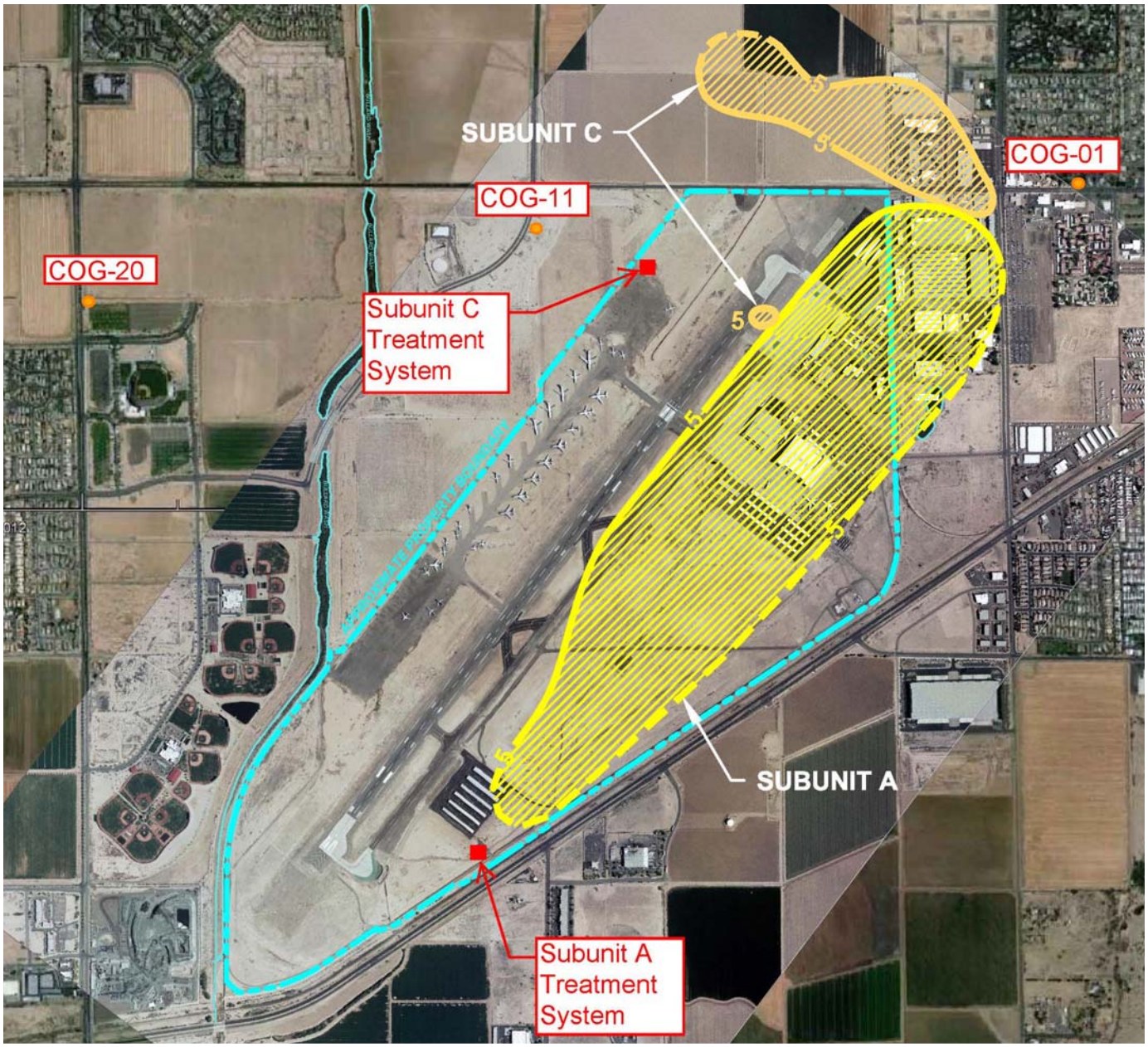
November 8, 2012

Jeff Sussman
Remediation Manager
The Goodyear Tire & Rubber Company

Agenda

- Current plume locations
- Status of ongoing cleanup
- Review of current/upcoming activities
- Modeling update

Current TCE Plume Limits



Status of Ongoing Cleanup

Subunit A Aquifer

- Peak TCE concentrations in monitoring wells have declined from 2,600 µg/L in 1990 to 360 µg/L in August 2012
- Treatment system uptime during 3rd quarter of 2012 was 99.0%

Subunit C Aquifer

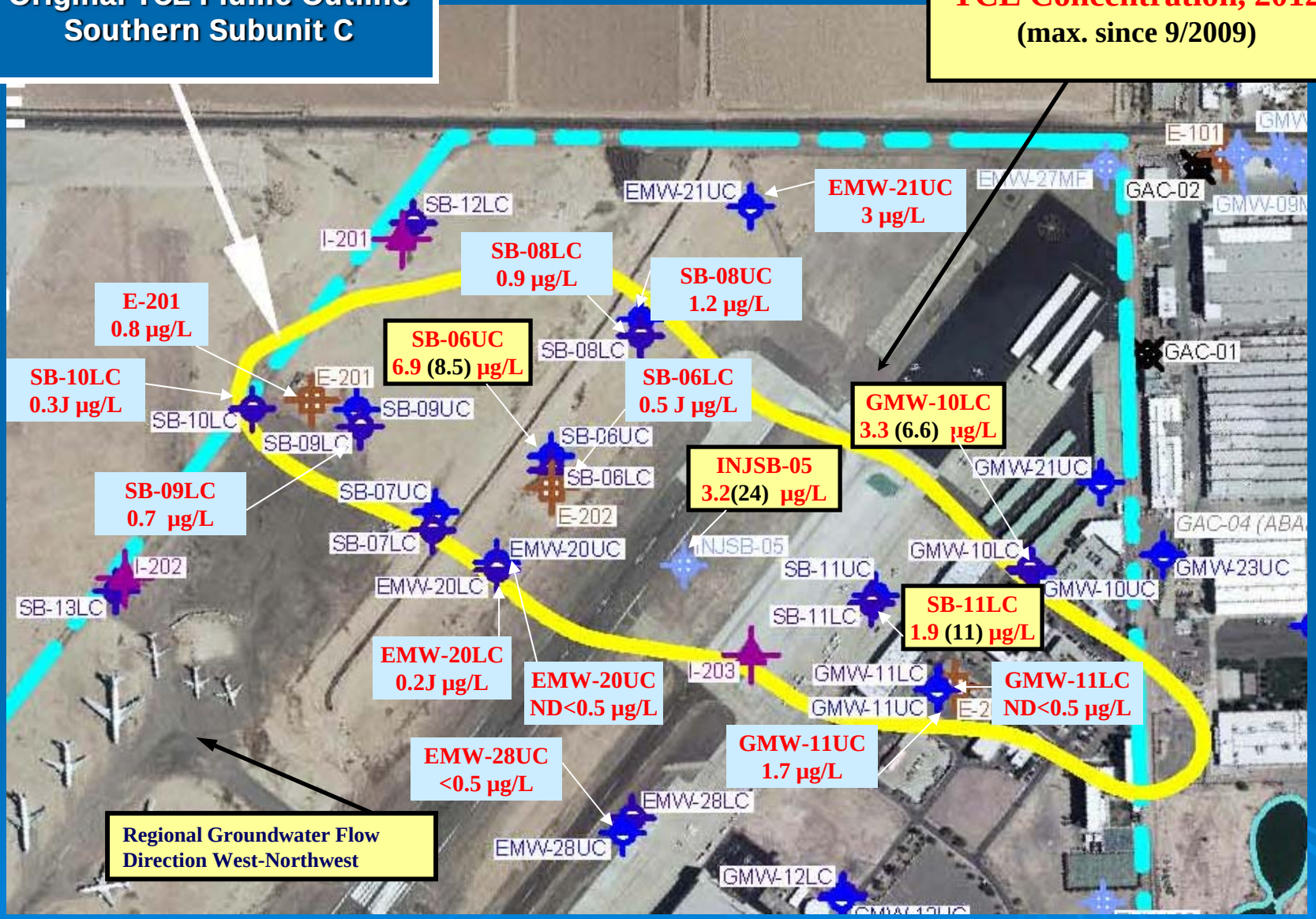
- Peak TCE concentrations in Northern Subunit C monitoring wells have declined from 180 µg/L in 1990 to 89 µg/L in August 2012
- Treatment system uptime during 3rd quarter of 2012 was 99.0%

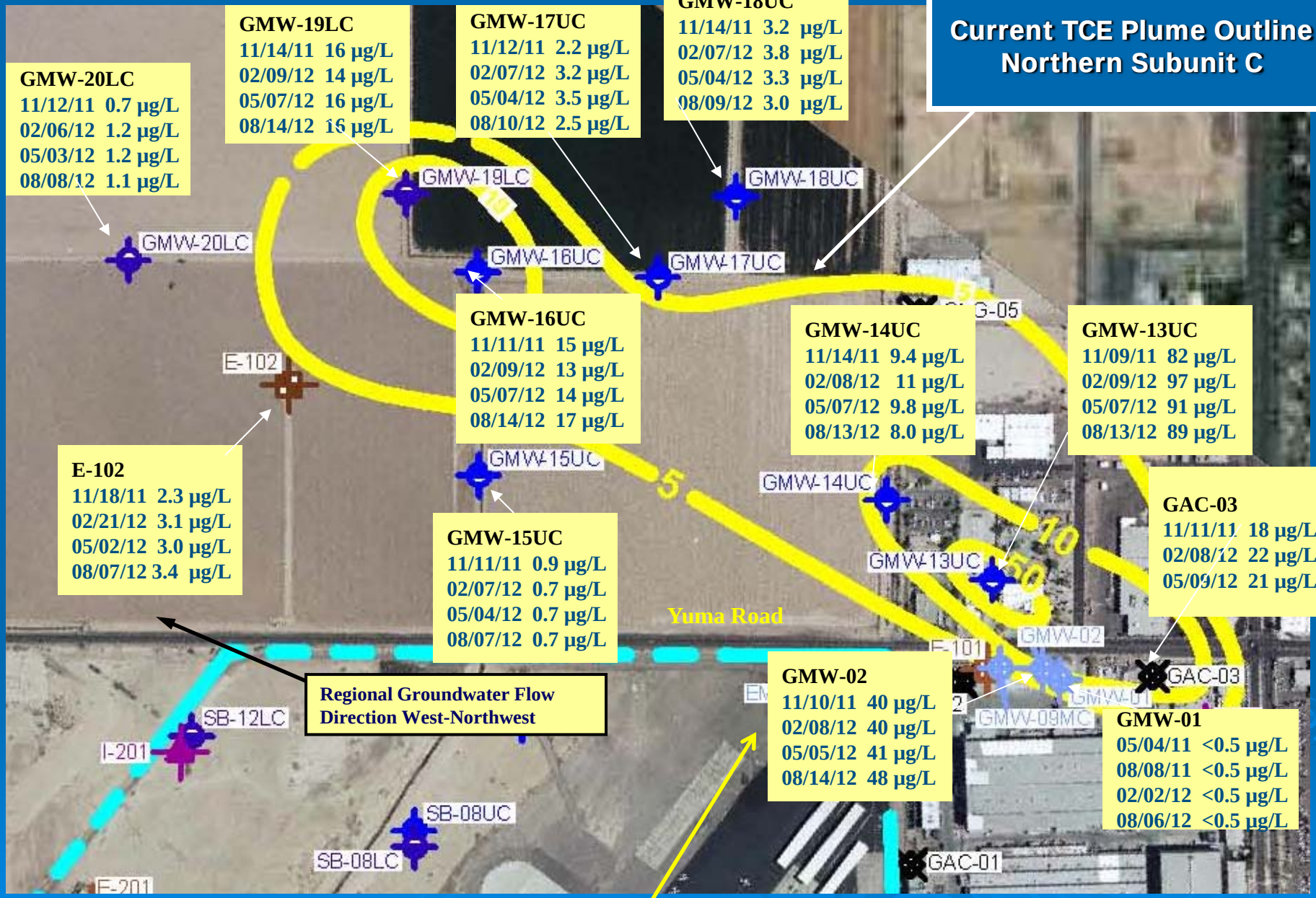
GOODYEAR

TRC

Original TCE Plume Outline Southern Subunit C

TCE Concentration, 2012 (max. since 9/2009)





TCE Concentrations
(Last 4 quarters)

Review of Current/Upcoming Activities

- Complete Bio-Trap® study (fourth quarter 2012)
- Install 3 new Subunit A monitoring wells (fourth quarter 2012)
- Install 2 new Northern Subunit C delineation monitoring wells (first quarter 2013)
- Initiate Northern Subunit C chromium investigation (first quarter 2013)
- Groundwater modeling (ongoing)

GOODYEAR

TRC

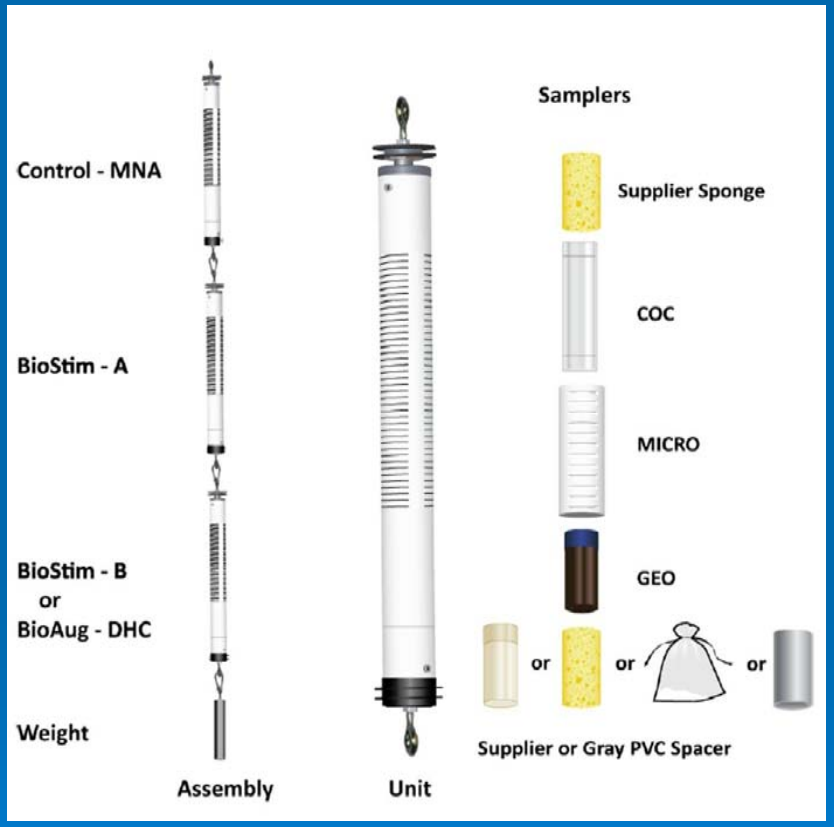
Bio-Trap® Study

- Bio-Trap® samplers were deployed in GMW-13UC (Northern Subunit C well with high Cr/TCE concentrations) on August 14, 2012, and will be removed in November
- The Bio-Traps® were baited with ZVI and lactate to evaluate potential enhanced biodegradation processes for Cr and TCE
- The Bio-Trap® included a non-baited “control” to evaluate natural attenuation processes for Cr and TCE
- Results will be used to evaluate the feasibility of in-situ treatment of areas with elevated Cr/TCE concentrations

GOODYEAR

TRC

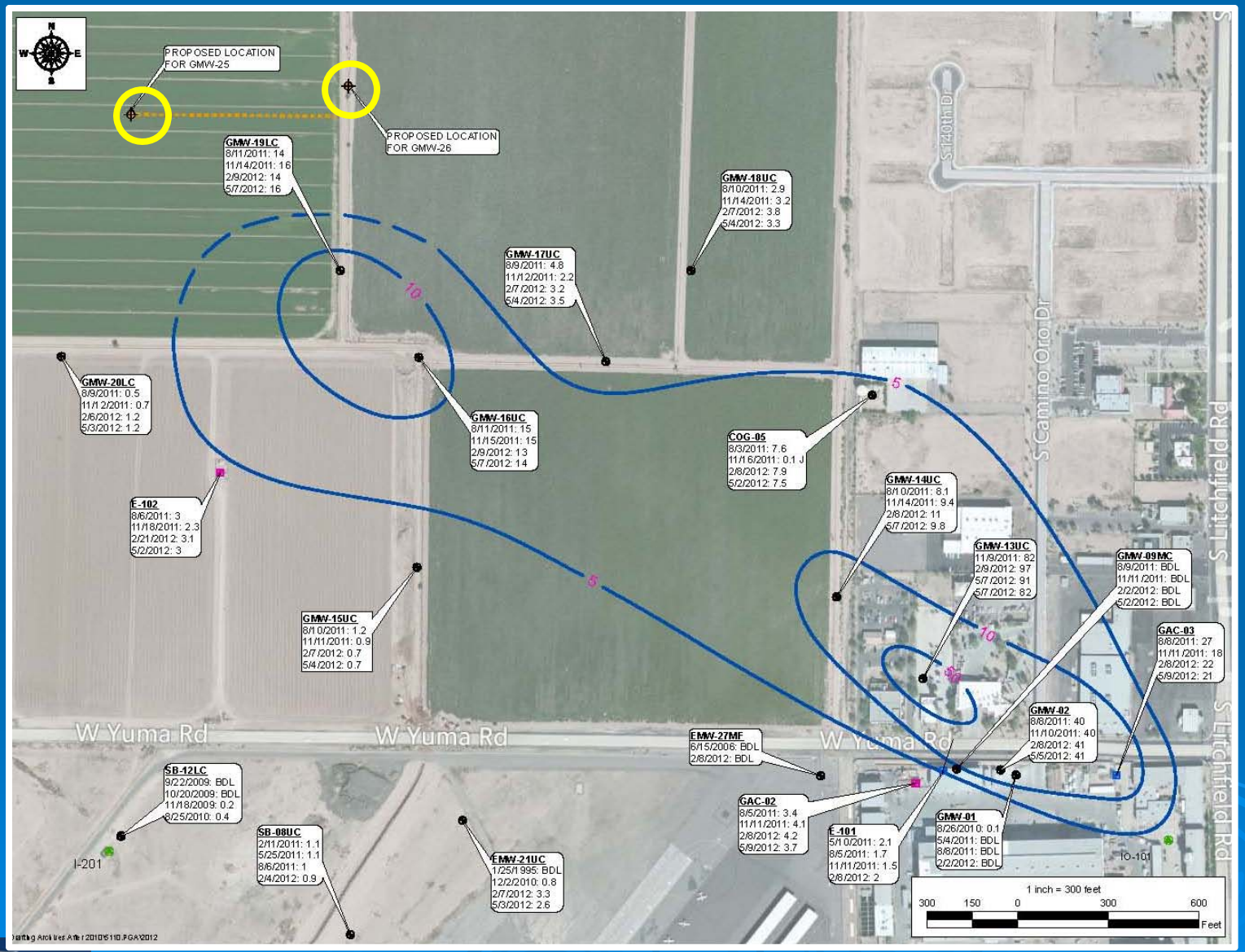
Baited Bio-Trap® Sampler



N. Subunit C Investigations

- GTRC will install two delineation wells to define the leading edge of the TCE plume (Work Plan submitted September 20, 2012)
- GTRC will investigate lateral/vertical extent of Cr downgradient of presumed source, using depth-discrete sampling from borings along a north-south transect (Work Plan submitted September 26, 2012)

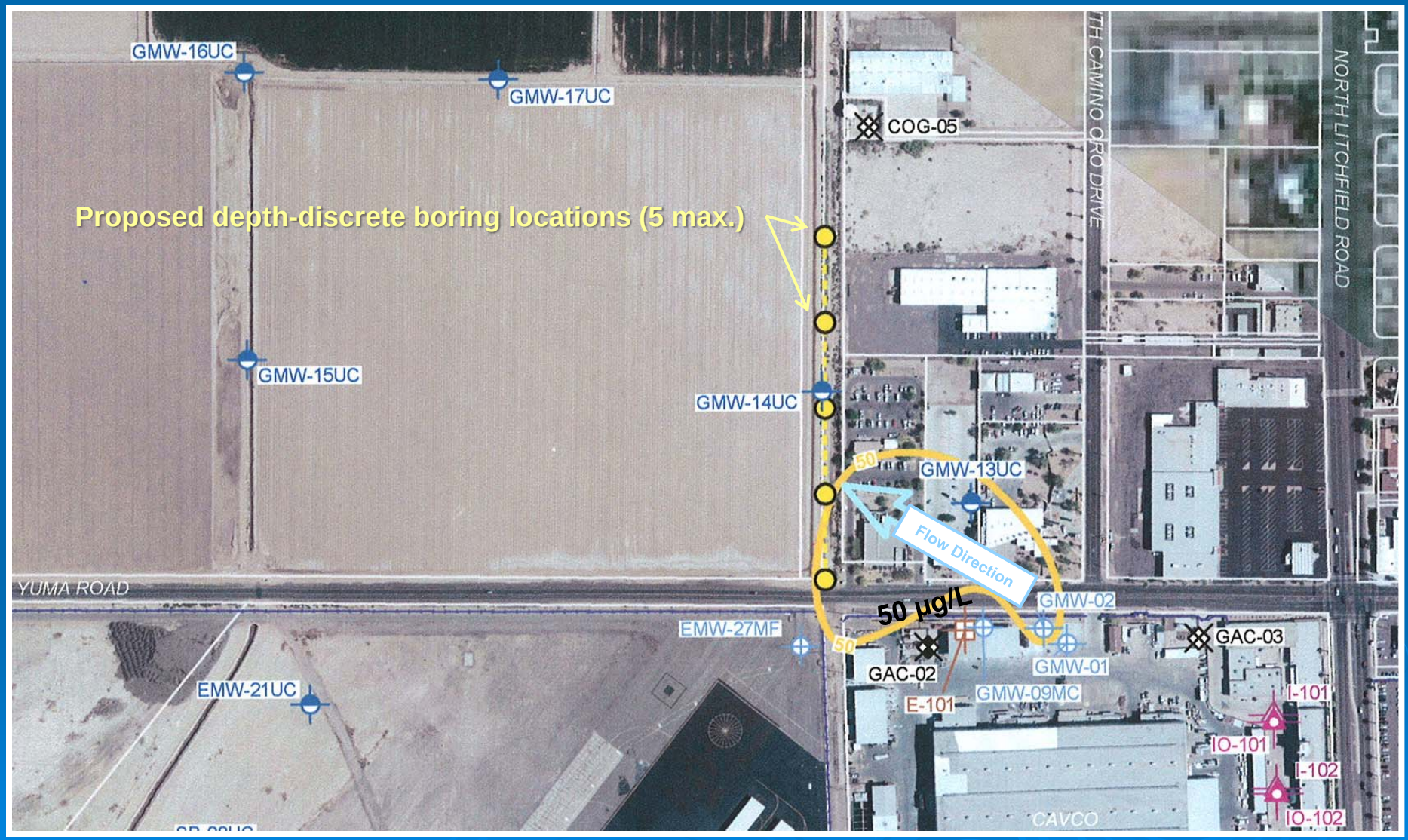
Proposed N. Subunit C TCE Delineation Wells



GOODYEAR

TRC

Proposed N. Subunit C Chromium Investigation



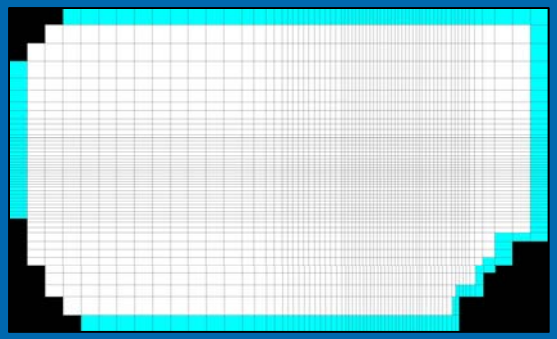
Groundwater Model

- The PGAS groundwater model was originally developed by ADWR, on behalf of EPA, in 1987.
- The model has been used by GTRC in the past to determine pump-and-treat well locations and plume capture, most recently in 2004-2005.
- GTRC has updated the model with recent well production information and site data.

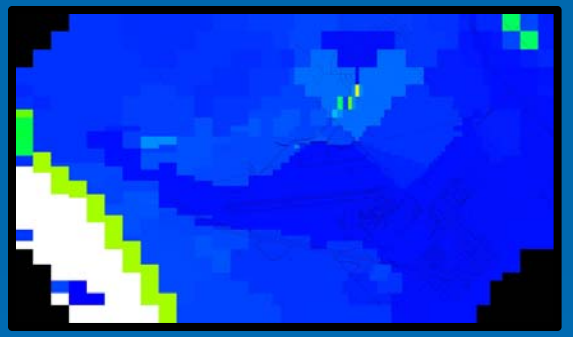
GOODYEAR

Groundwater Model Update Summary

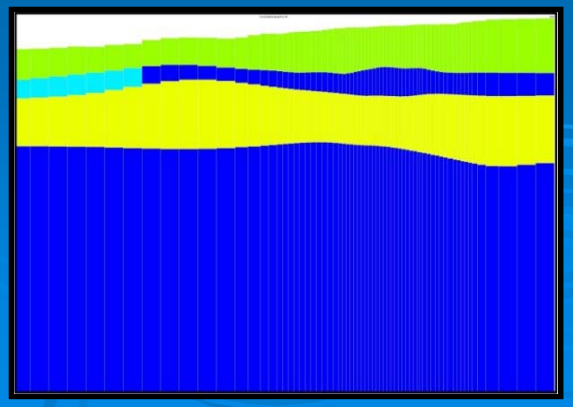
- Updated boundary conditions to reflect current groundwater table conditions and pumping activities from PGAN
- Updated pumping rates and recharge to reflect current conditions (additional wells, land use changes)
- Calibrated hydraulic conductivity and other input parameters using plume data collected over 20 years



Model Grid



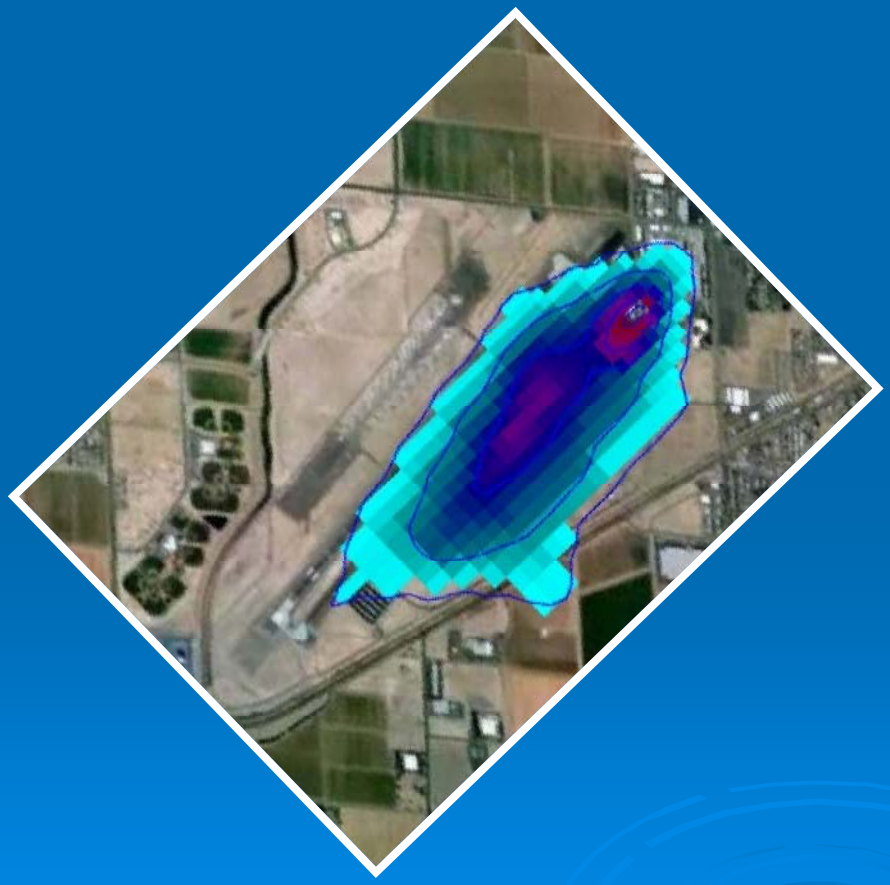
Recharge Array



Model Layers (Subunits A, B, C, and Middle Fine)

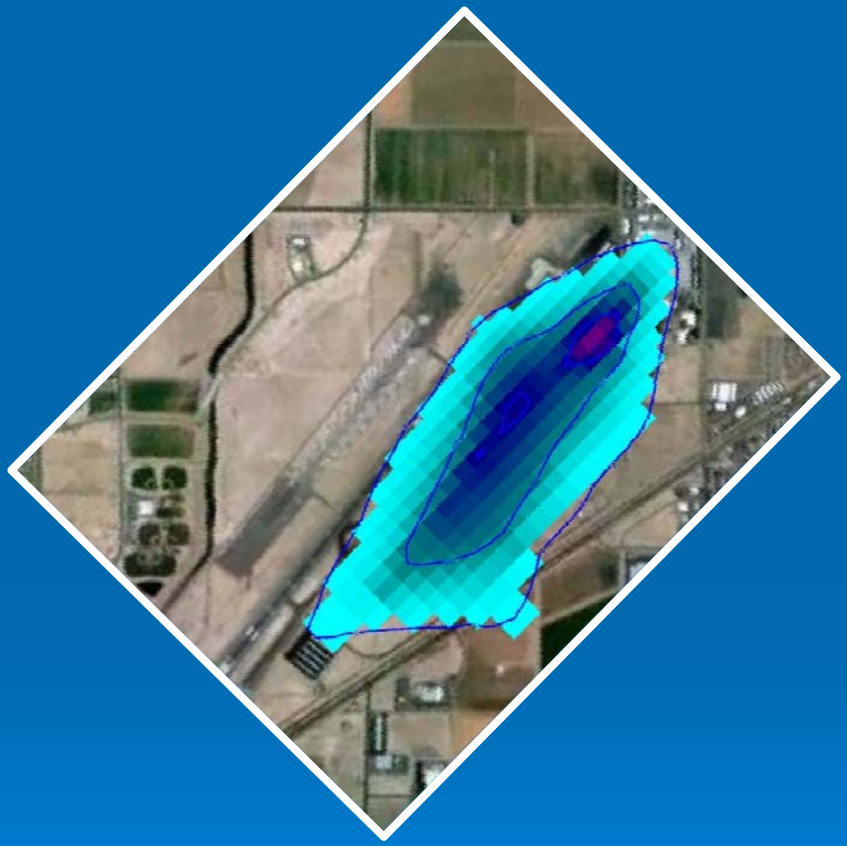
Model Predictive Capability Subunit A TCE - June 1990

Model v. Field Data



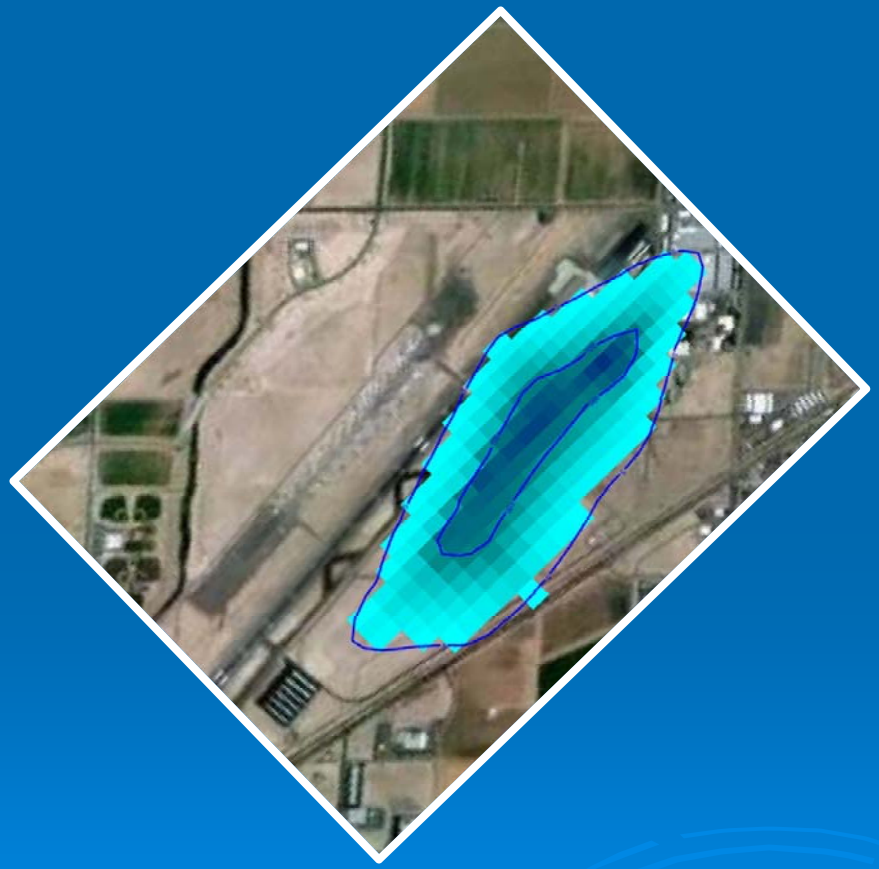
Model Predictive Capability Subunit A TCE - June 1998

Model v. Field Data



Model Predictive Capability
Subunit A TCE – January 2004

Model v. Field Data



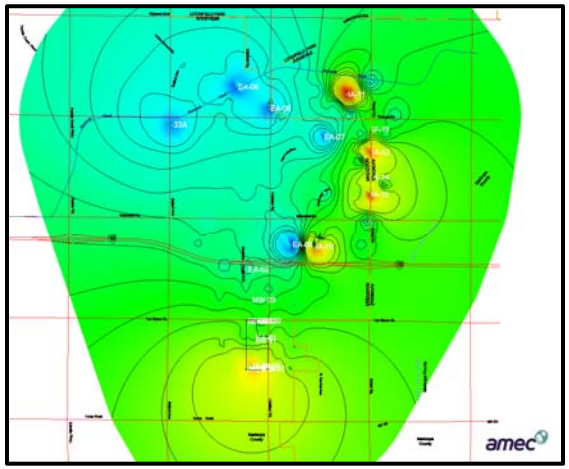
Model Predictive Capability
Subunit A TCE – February 2008

Model v. Field Data

Model Predictive Capability
Subunit A TCE – August 2010

Model v. Field Data

Citizen Advisory Group Meeting

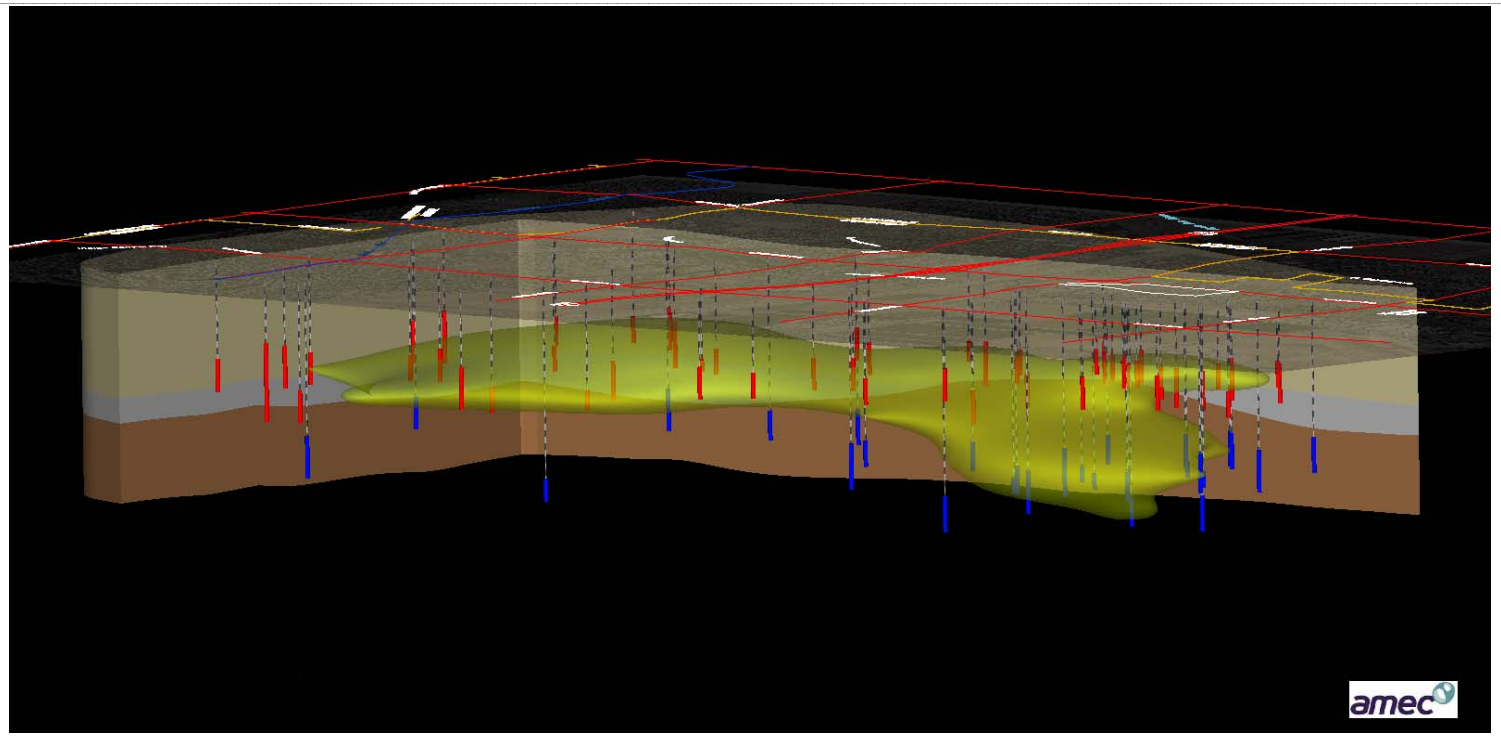


CAG Meeting
PGA-North Superfund Site
November 8, 2012

Stephanie Koehne, MBA, Project Manager
AMEC Geomatrix

Harry Brenton, RG, Principal Geologist
Matrix New World Engineering

Extent of TCE Distribution in Subunit A and Subunit C



- Contamination profile from depth specific samples and lithology from 100+ wells
- Hydropunch Samples at 10 to 20 ft intervals
- Monthly and Quarterly Groundwater Samples
- Subunit A - Majority TCE mass
- Subunit C – TCE Mass limited to South of I-10
- Highest TCE concentrations remain near source area

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Current Subunit A and Subunit C TCE Plumes

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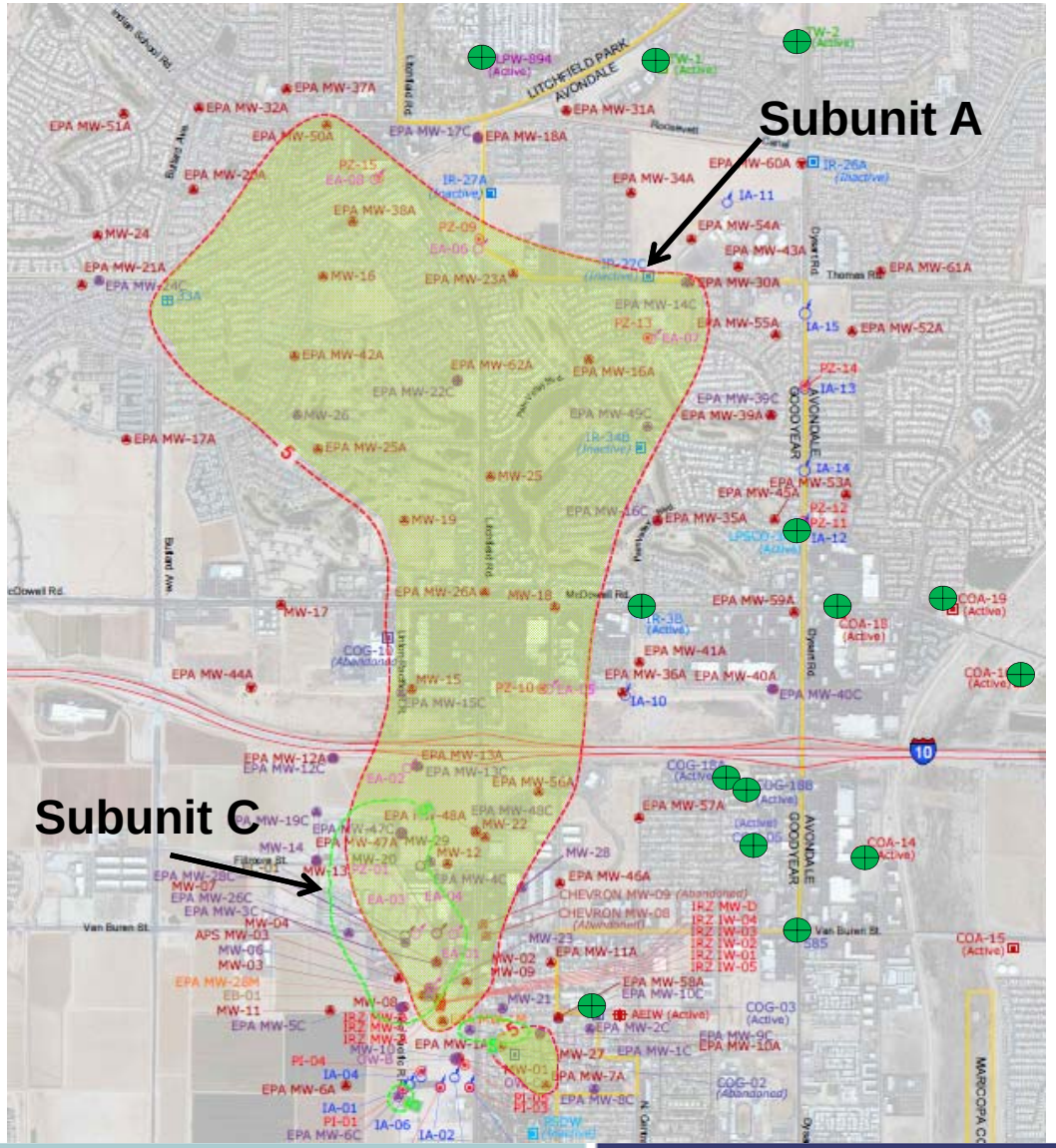
- 3rd Qtr 2012 Subunit A and Subunit C TCE Plumes



- = Water Supply Well

Regional Groundwater Treatment Systems Update

Groundwater Treatment Systems

- MTS – Onsite; S of Van Buren
- EA-05 – Central Area - S of I-10
- 33A/EA-08 – NW Area
- EA-06/EA-07 – N and NE Area

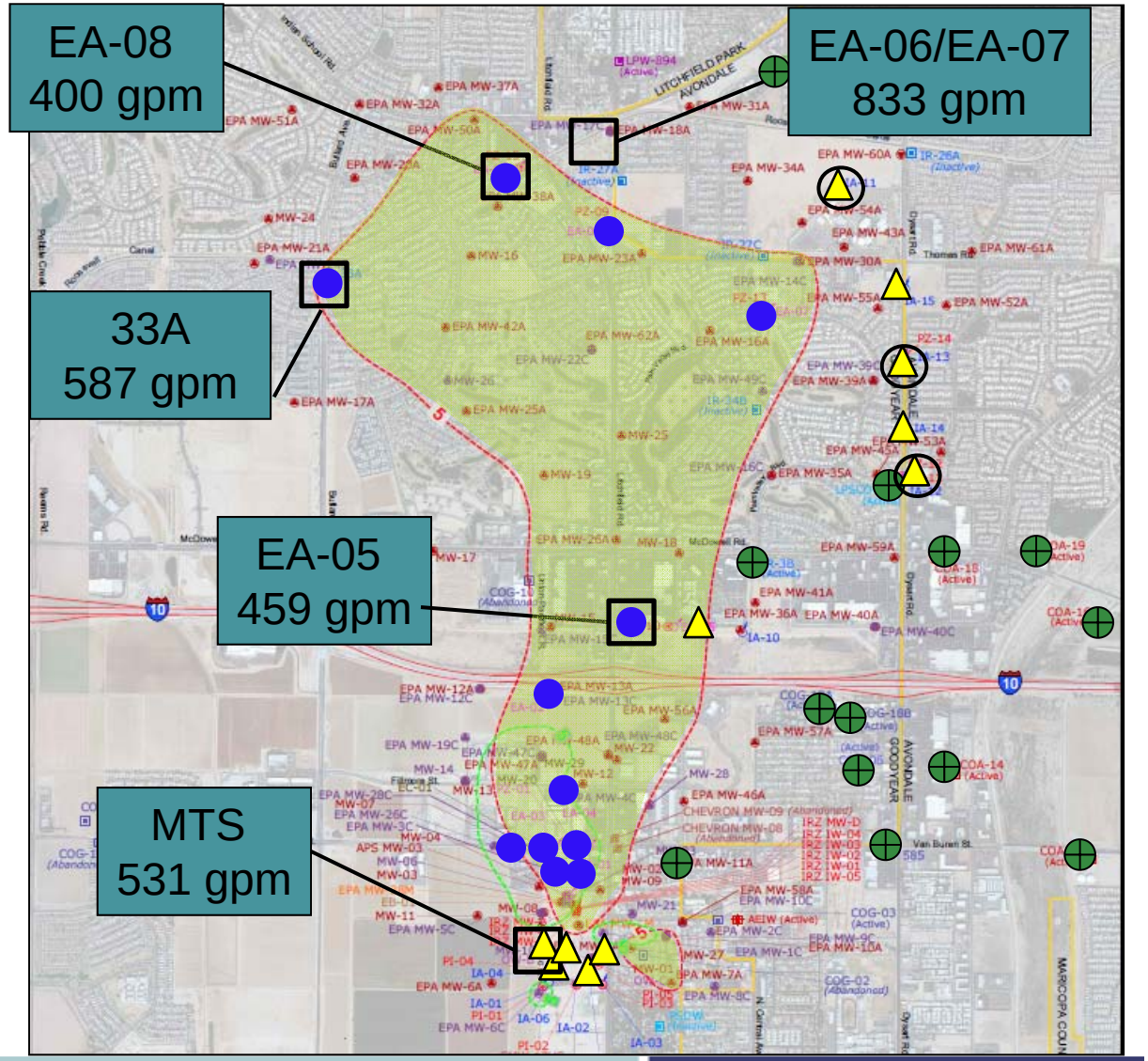
System Totals (October 2012)

- Combined Flow – ~2,797 GPM
- Total TCE Mass Removed - 55,348 lbs (4,544.2 gallons)

● △ = Extraction Well/Injection Well

⊕ = Drinking Water Supply Well

□ = Groundwater Treatment System



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Subunit A Plume Capture 3rd Qtr 2012

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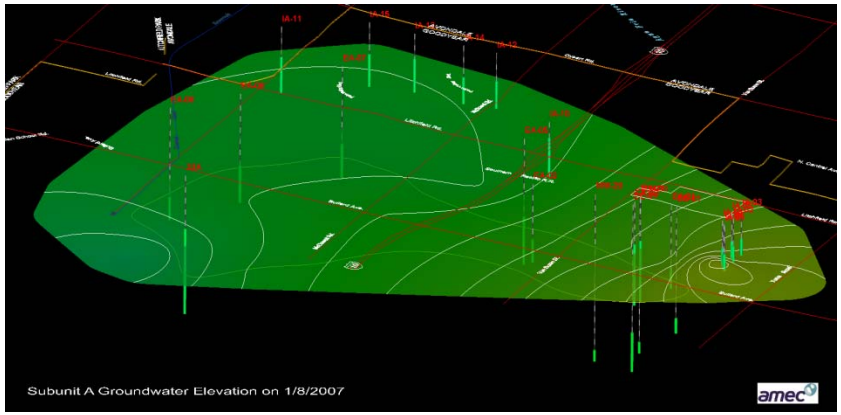
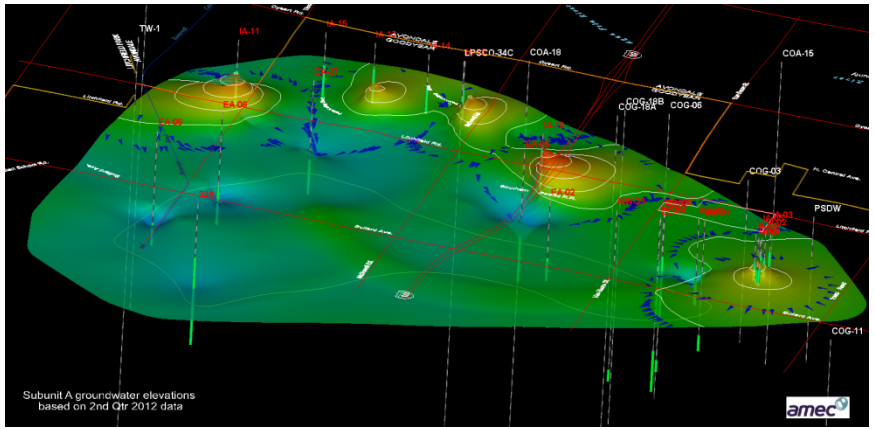
Lines of Evidence

- Changes in TCE concentrations/Plume morphology
- Changes in Groundwater Flow directions over time
- Changes in Groundwater Levels

2007



2012



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Subunit A TCE Trends
NW Area Monitor Wells

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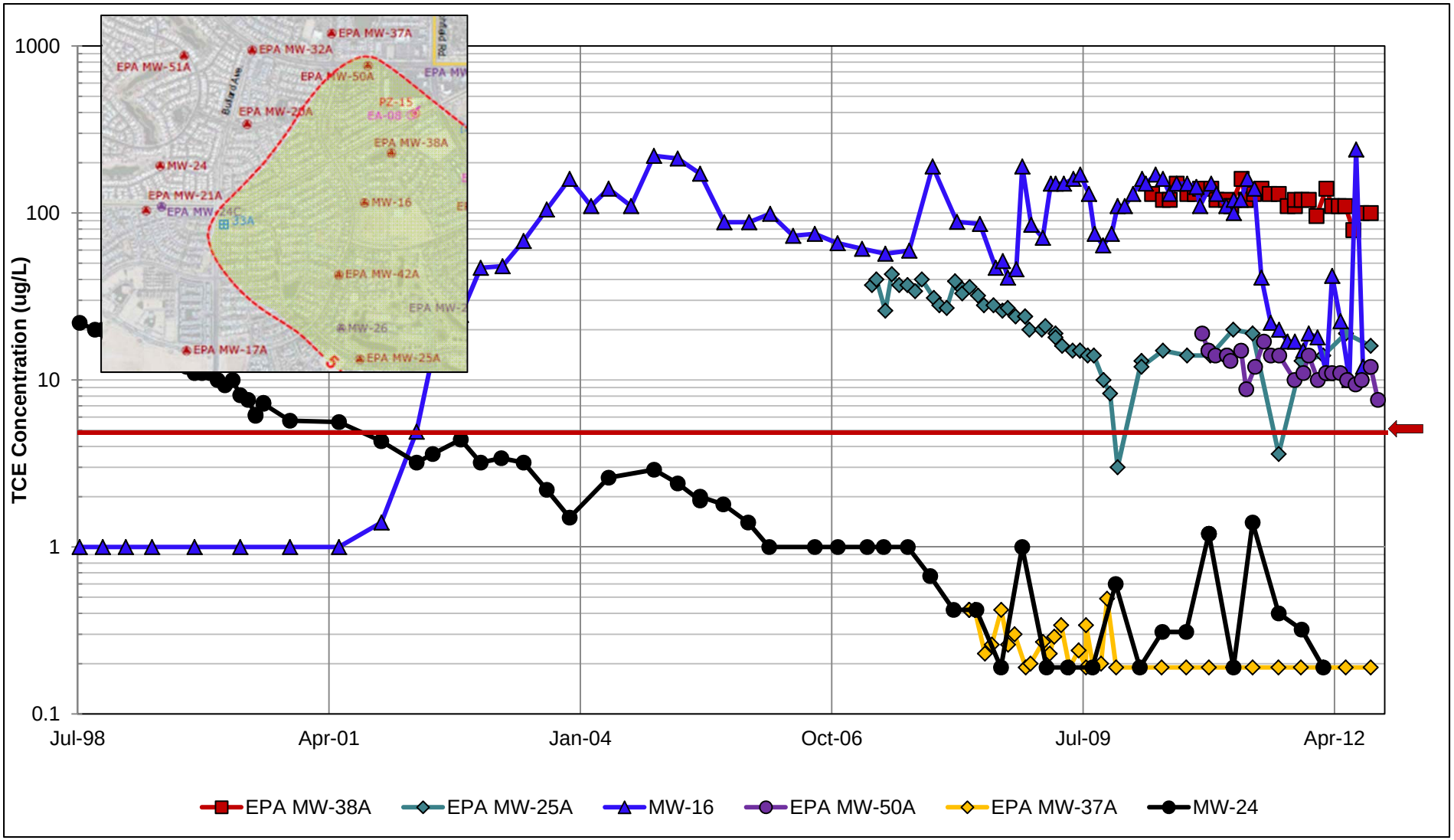

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Subunit A TCE Trends
NE Area Monitor Wells

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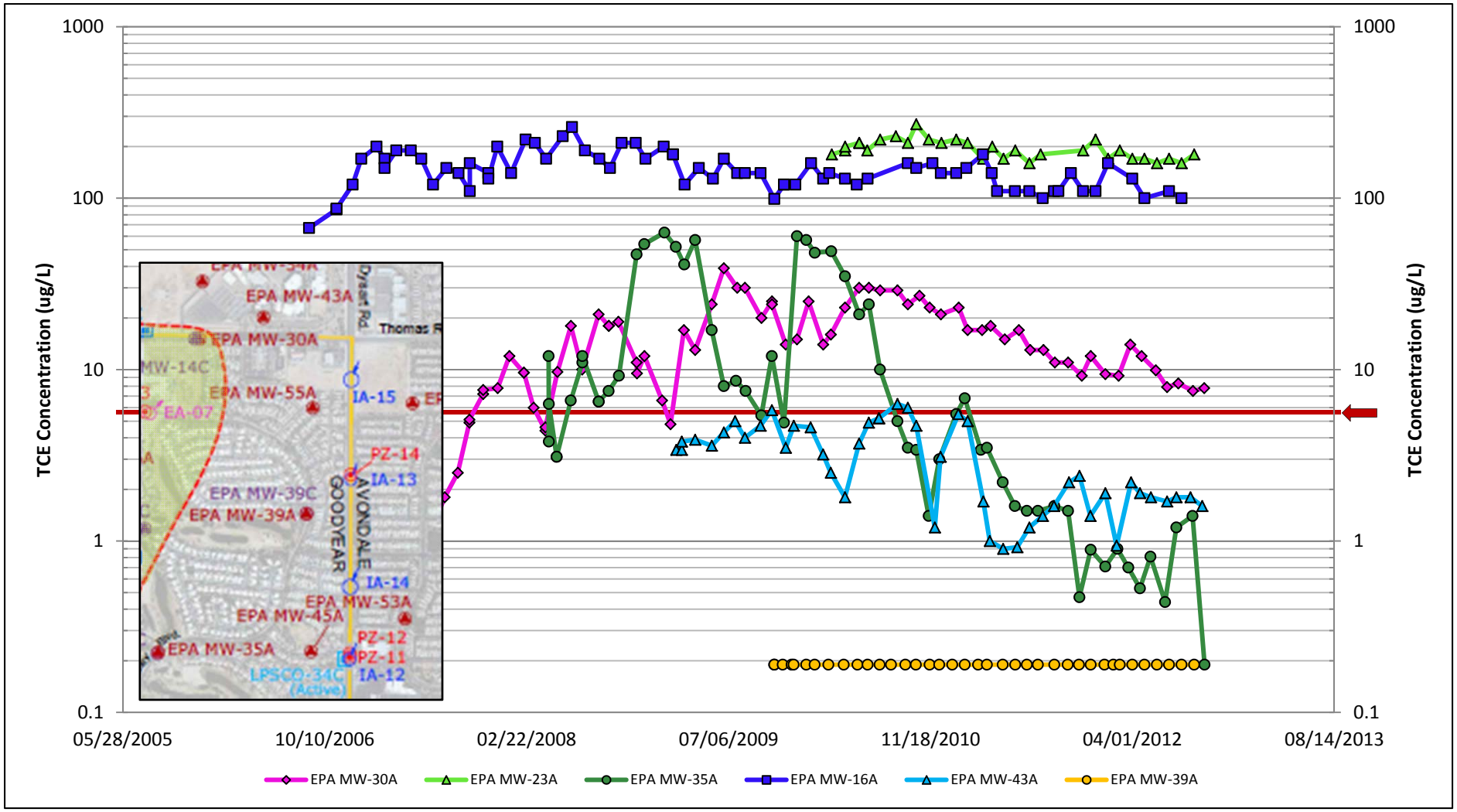

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Subunit A TCE Trends South of I-10

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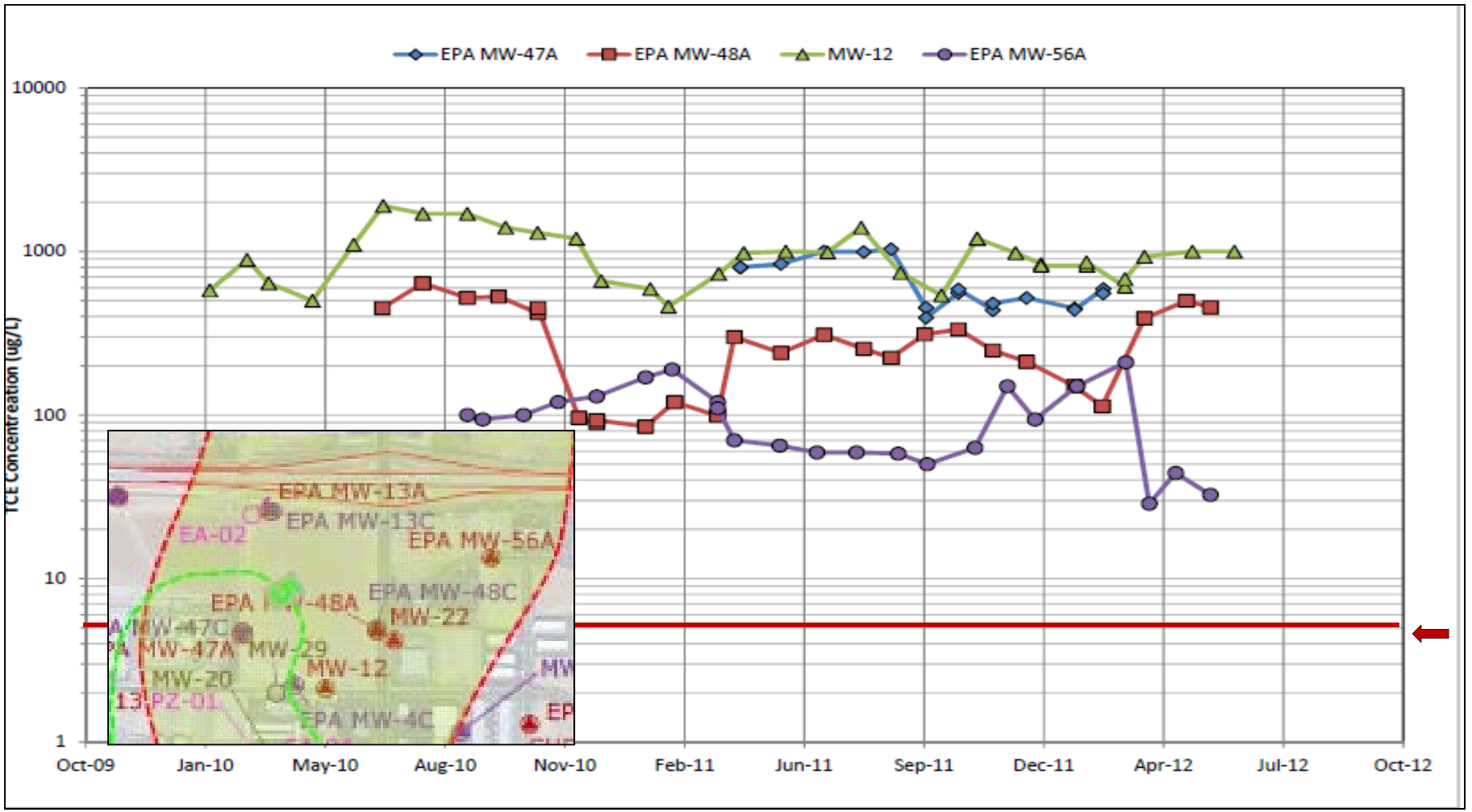

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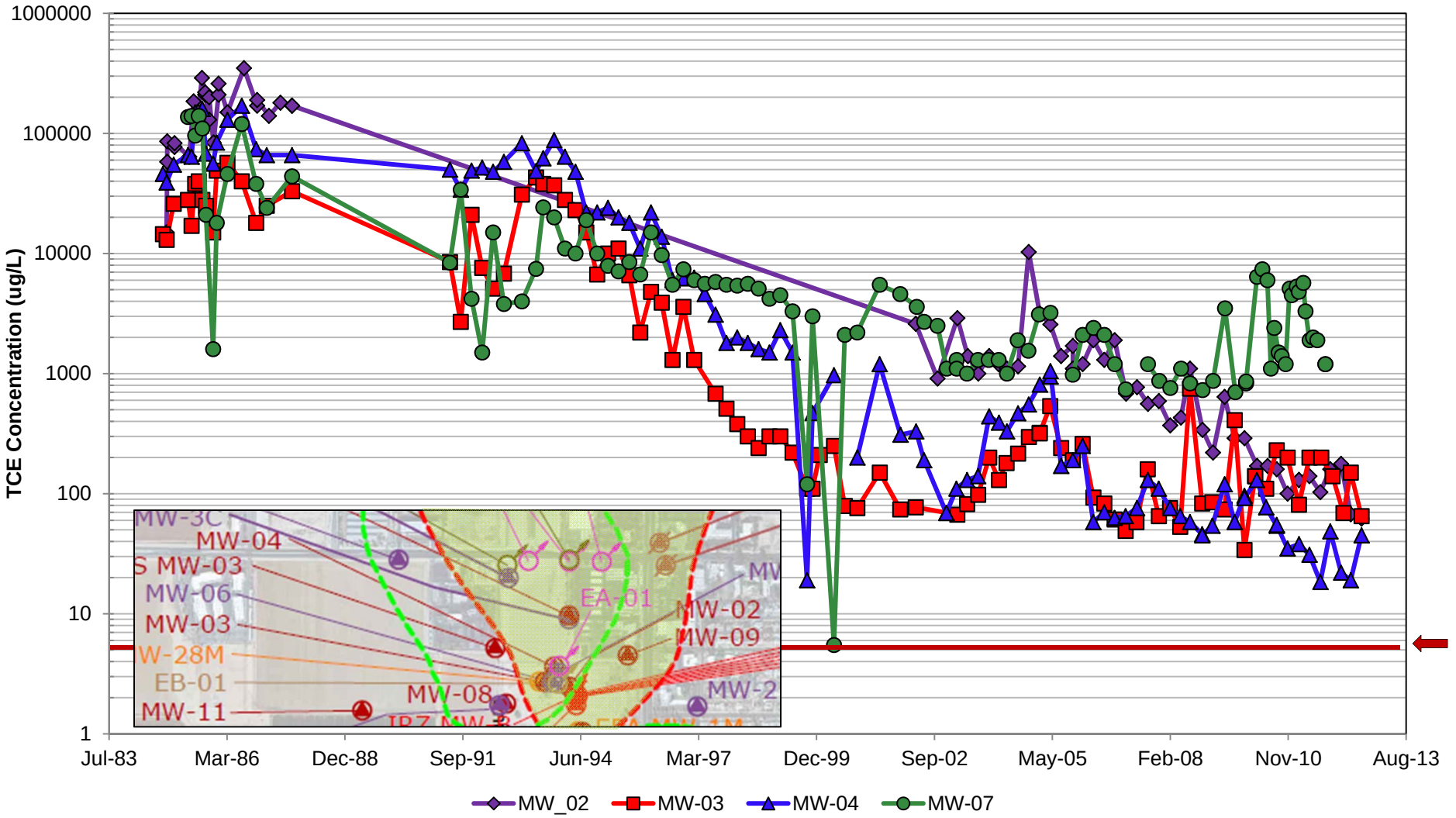
Subunit A TCE Trends South of Van Buren

amec



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Changes in Water Levels

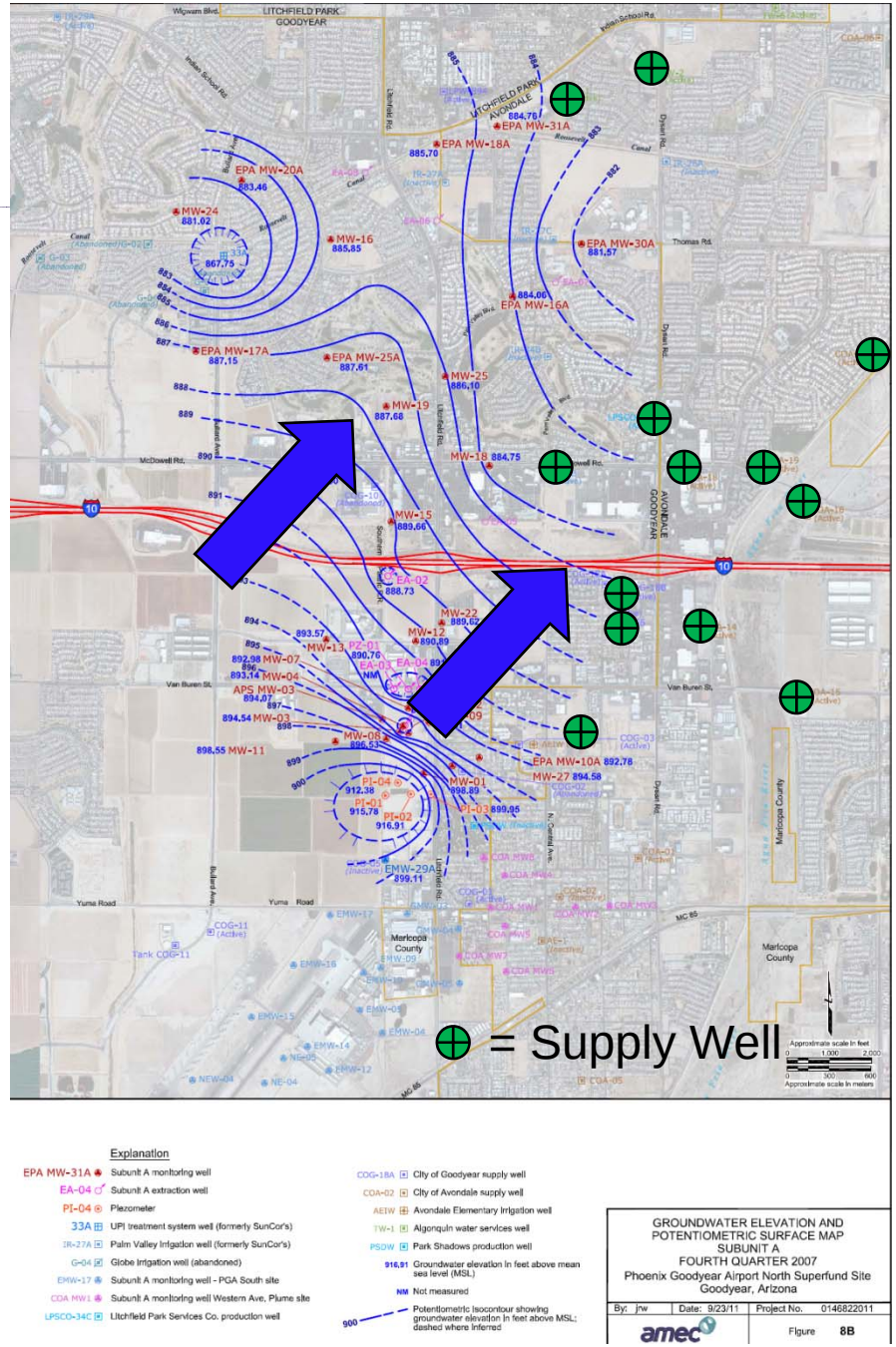
Fourth Quarter 2007

2- Subunit A Groundwater Treatment Systems

- 33A GTS
- Main Treatment system (MTS)

Shifts in groundwater flow direction toward the NE

- Increased pumping in Supply wells near Agua Fria River to satisfy the water needs of local communities
- Pumping of water supply wells > pumping of PGAN remediation Wells
- No injection wells in NE area
- Increased TCE concentrations in key sentinel monitor wells



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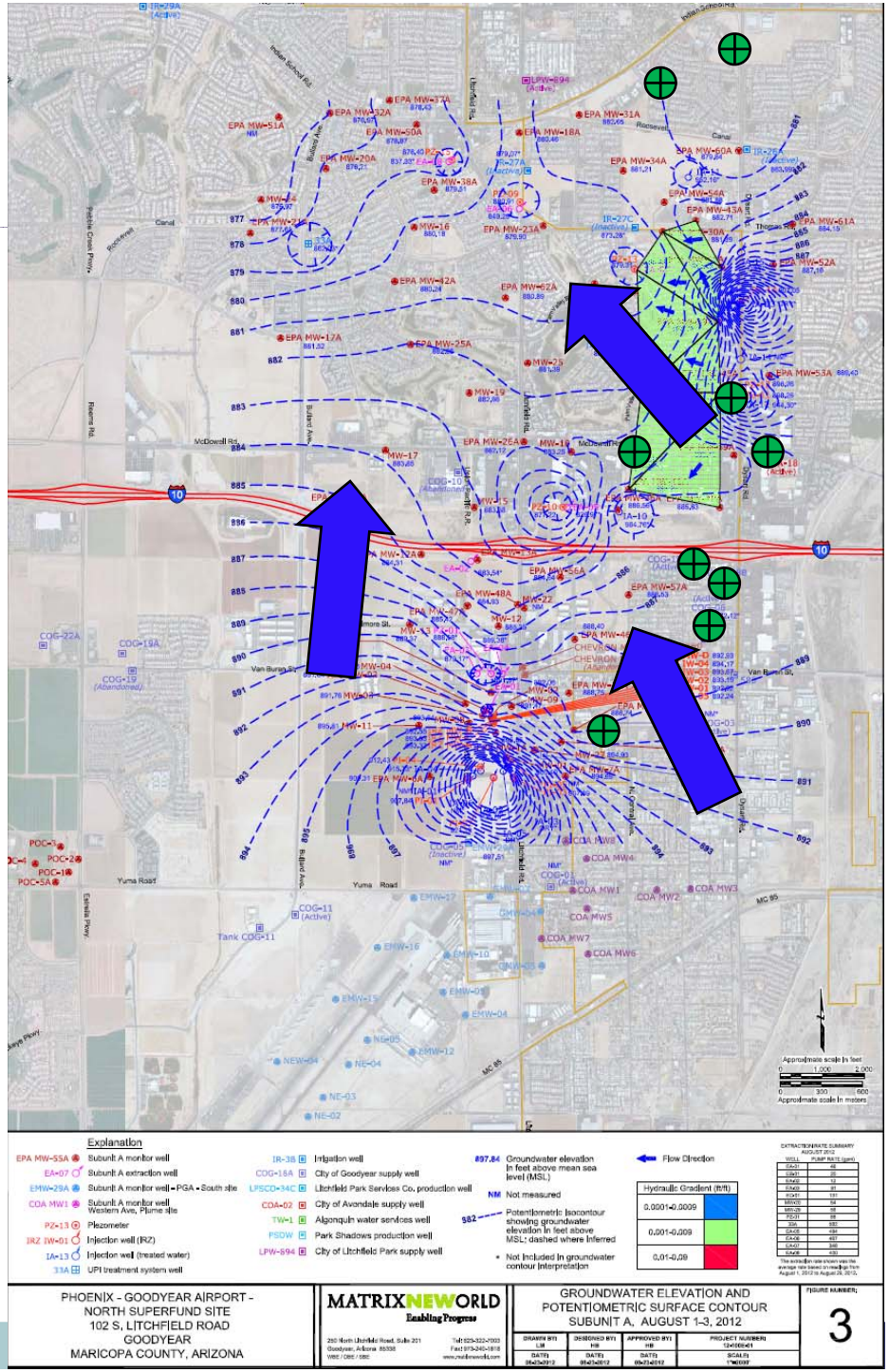
Changes in Water Levels

Third Quarter 2012

5- Subunit A Groundwater Treatment Systems

- 33A GTS
- Main Treatment system (MTS)
- EA-05 GTS (Online March 2008)
- EA-06 GTS (Online Dec 2007)
- EA-06 GTS Expansion (Aug 2010)
- EA-08 GTS (Online December 2011)

Continued operation has resulted in a shift in groundwater flow direction toward the north and northwest away from water supply wells



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Interpreted Subunit A Capture Zone

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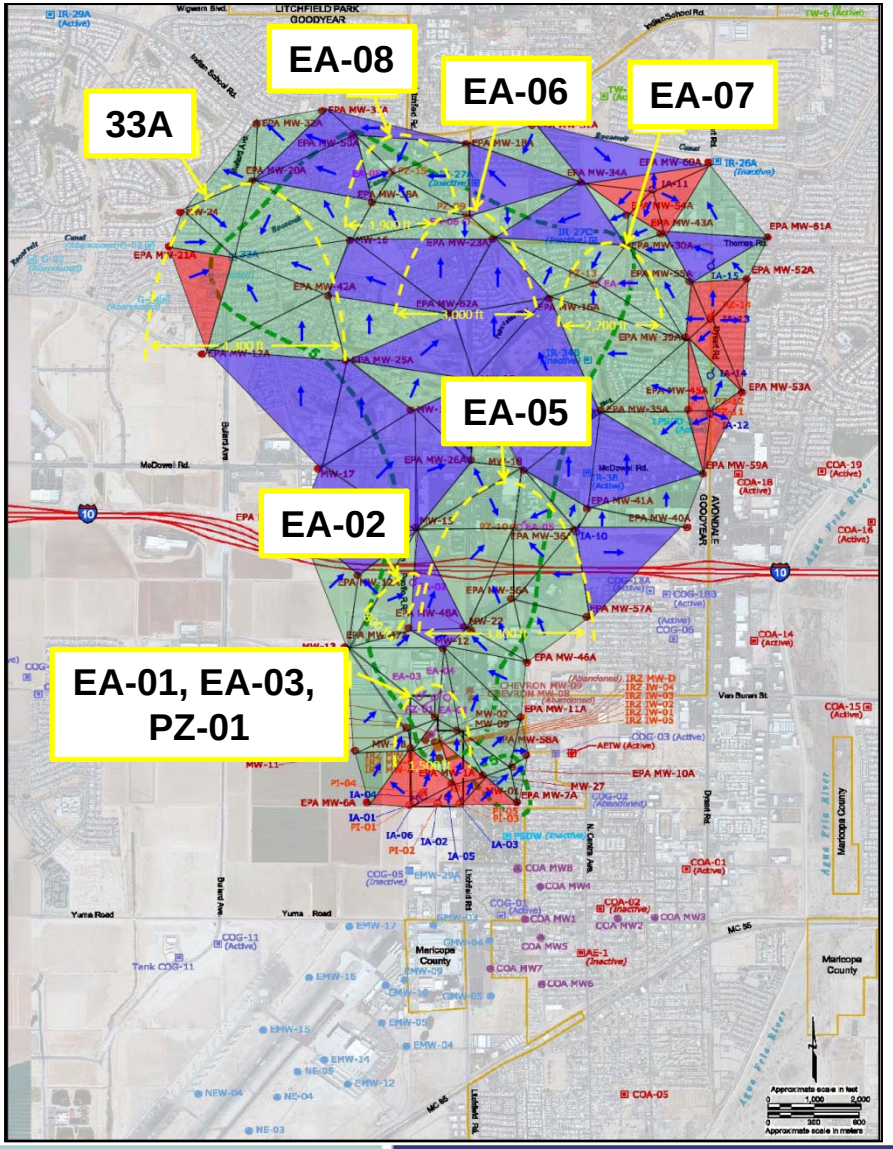
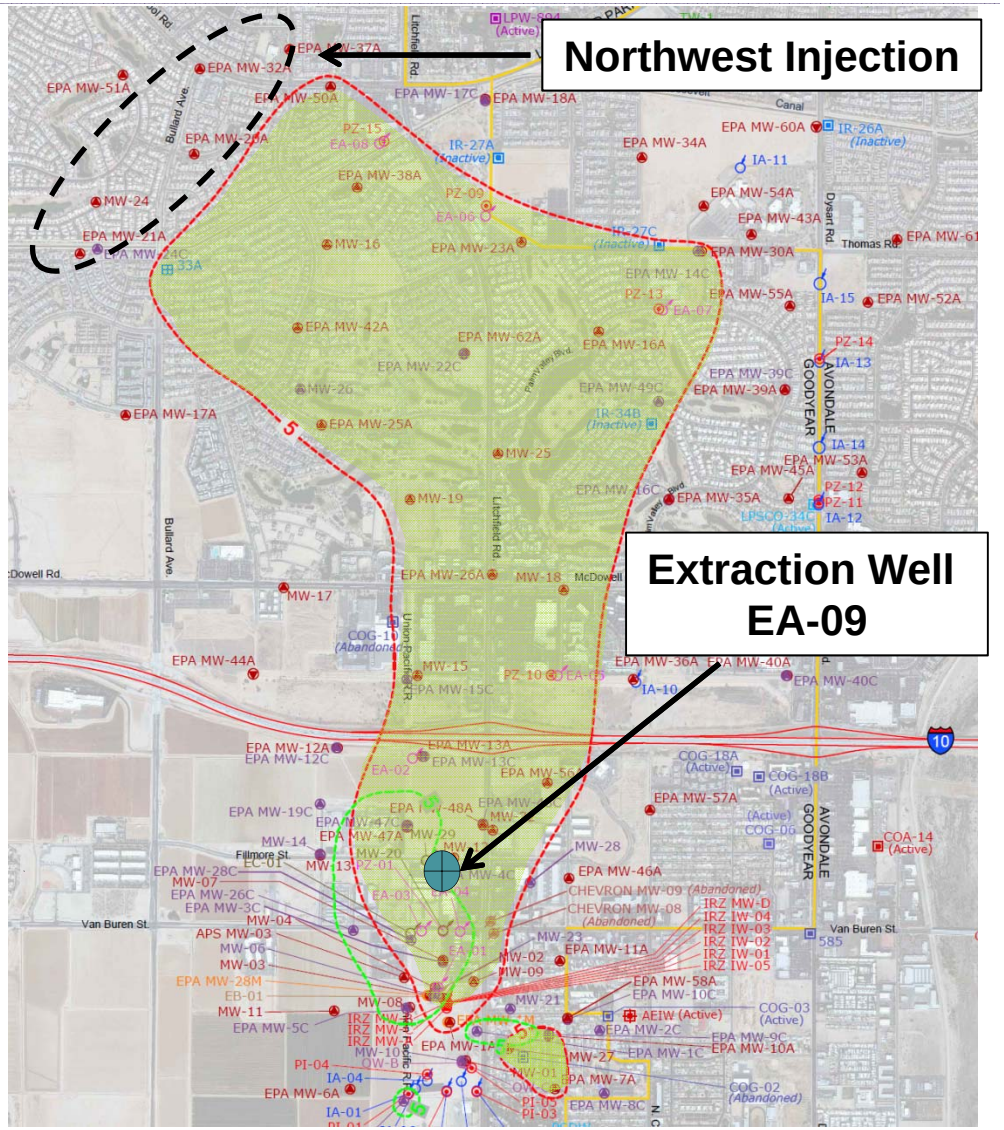
3rd Qtr 2012

- Based on changes in Groundwater Gradient and Flow directions
- Demonstrates hydraulic control and capture of the Subunit A TCE plume with the exception of the extreme Northwest area
- Expanded GTS's north of I-10 have contained the Subunit A TCE plume.
- Water Supply wells are being protected



5-Year Plan Build Out

- **Extraction Well EA-09**
  - New Subunit A extraction well, piping, and MTS upgrades
  - Work Plan submitted June 26, 2012
  - Work anticipated to begin 4th Qtr 2012 or early 2013
- **Northwest Injection**
  - Installation of injection well(s)
  - Work anticipated for late 2013 or early 2014
- **Subunit C Extraction**
  - Subunit C extraction well, piping, and Subunit C specific GTS
  - Work Plan anticipated for 2014
- **Source Area Remediation**
  - Final Feasibility Study to be submitted in Fall 2012
  - Work anticipated 2013/2014



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QUESTIONS?

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