KELLY AFB
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 3272

KELLY RESTORATION ADVISORY BOARD
TECHNICAL REVIEW SUBCOMMITTEE
MEETING AGENDA
September 26, 2001, 6:30 p.m.
Cortez Public Library, 2803 Hunter Road

I.	**Introduction** A. Agenda Review and Handouts	**6:30 – 6:40 p.m.**	**Dr. Lene, Comm. Co-chair**
II.	**Presentation:** **Explanation of Recycling of Building 301 Materials**	**6:40 – 7:00 p.m.**	**John Glass, AFBCA**
III.	**Briefing:** **Produce Sampling Project**	**7:00 – 7:15 p.m.**	**Ron Porter, Mitretek**
IV.	**Presentation:** **Update on Radium Investigation**	**7:15 – 7:30 p.m.**	**Jack Shipman, AFBCA**
V.	**Review Latest Draft** **of Plume Maps for Public Distribution**	**7:30 – 7:45 p.m.**	**William Ryan, AFBCA**
VI.	**Discussion:** **RAB/TRS Recommendation for Zone 4 Remedy**	**7:45 – 8:15 p.m.**	**Dr. Lene, Comm. Co-chair**
VII.	**Administrative** A. BCT Update B. Spill Summary Report C. Documents to TRS/RAB D. TAPP Grant Report E. Action Items F. Agenda/Location/Time of Next TRS Meeting	**8:15 – 8:30 p.m.**	**Dr. Lene, Comm. Co-chair**
VII.	**Adjournment**	**8:30 p.m.**	

DRAFT MEETING MINUTES

KELLLY AFB TECHNICAL REVIEW SUBCOMMITTEE (TRS)
TO THE RESTORATION ADVISORY BOARD (RAB)

26 September 2001, Cortez Library,
2803 Hunter Road
Dr. Gene Lené TRS Community Co-chair

Attendance

Dr. Gene Lené, Community Co-chair
Mr. George Rice, Community Member
Mr. Dan Zatopek, AFBCA
Mr. Doug Karas, AFBCA
Ms. Lynn Myrick, Booz Allen
Mr. William Ryan, AFBCA
Mr. Mark Weegan, TNRCC
Mr. Armando R. Quintanilla, Community Member
Mr. John Glass, AFBCA
Mr. Scott Lampright, Bexar Co. EM
Mr. Chuck Meshako, AFBCA
Mr. Val Martinez, Booz Allen
Ms. Vanessa Musgrave, AFCEE
Mr. Ron Porter, Mitretek
Ms. Laura Stankosky, U.S. EPA

I. Introduction: The meeting began at 6:42 p.m.

Mr. Dan Zatopek proposed a review question regarding Zone 4. The original 1999 Tap Order was for the review of the final draft report form, executive summary Zone 4. AFBCA wants feedback from the TRS on whether the contractor needs to review the whole report. To review the entire report would change the scope of work and the original cost estimate. The other two options are to have the contractor focus on the Zone 4 OU2 or just regroup and start all over.

Discussion:

Mr. George Rice: Provide the larger document to the contractor for reference and have them focus on the OU2.

The TRS decided to provide the entire report for reference purposes and have the contractor only review the OU2 portion.

II. Presentation on Explanation of Recycling of Building 301 Materials

Mr. John Glass, AFBCA presented information on the recycling efforts going on at Building 301. These efforts include equipment removal to include reuse of tanks, vats, cranes, etc; recycling of 680 tons of steel after decontamination; and disposal of steel and miscellaneous debris. The current effort includes the recycling of mercury and batteries; disposal of the basement concrete, some of that is hazardous, the majority would have been sent to be recycled. The pending efforts provide the subcontractor the discretion to recycle or dispose of all the materials. The disposal classification is Class II if not recycled. Class II is neither

inert nor hazardous. The debris will include 15K – 20K tons of concrete, 2.5 K tons of steel and other materials (i.e. copper & lumber). The disposal of the debris will be left up to the left up to the subcontractor, which is usually the most cost-effective method.

Discussion:
Q. Mr. Armando Quintanilla: What is the cost for this project?
A. John: $2.9 million

Q. Mr. Quintanilla: What are the chromium levels for the building?
A. Mr. Glass: Different areas had different values; once washed off the levels are barely detectable.
A. Mr. William Ryan: Stated that AFBCA would get back with Mr. Quintanilla on the Chromium Levels.

Q. Mr. Quintanilla: Does the $2.9 million include the recycling and disposal of the building?
A. Mr. Glass: The contractor figures the differential for the recycling costs when they bid the project.

Discussion regarding missing Community Member Minutes from a previous TRS meeting.

Mr. Rice requested a copy of Mr. John Folk-Williams notes from the 12 June TRS Meeting. He is concerned that this request has not been fulfilled. Ms. Lynn Myrick mentioned that they had contacted Mr. Folk-Williams but they could not find his personal notes. Mr. Rice stated that he wanted those notes to prove that a CH2MHILL employee did in fact state that the majority of the plumes came from East Kelly activity. Mr. Rice would also like to see CH2MHILL brief the TRS again and restate the comments made at the 12 June meeting. If this is not possible, Mr. Rice would like a copy of the presentation that was given. Mr. Mark Weegar voiced a concern that the TRS/RAB charter was intended for free exchange and discovery and that it was not to be used as a basis for future litigation. This prompted a debate, which concluded that this forum was not to establish legality issues.

III. Presentation on Produce Sampling Project

Mr. Ron Porter, Mitretech, presented information on the food chain sampling project. The project will sample and analyze the community's fruits, nuts and vegetables. The contract will be awarded to CH2MHILL with the Southwest Research Institute (SWR) to conduct the sampling and analysis of pecans, peppers, tomatoes and bananas. The SWR has been analyzing produce primarily for pesticides for the past 40 years. The SWR will be responsible for the sampling, transportation, extraction and analysis of all produce. The San Antonio Metropolitan Health District (SAMHD) will identify the community members that would like to participate.

Discussion
Q: Mr. Quintanilla: Why not sample carrots and potatoes?

A: Mr. Porter: Due to the weather (heat) this produce would not be sampled.

Q: Mr. Quintanilla: I understand the University of Iowa has conducted similar studies.
A: Mr. Porter: Hill AFB has studied tomatoes under optimal conditions, and Brooks AFB has sampled pecans. To date, there is limited data available. This project will be a survey, consisting of 56 samples from areas within the plume.

Q: Mr. Rice: Are residents that use the ground water from personal wells for irrigation going to be tested? Who will be tested?
A: Mr. Porter: Presently we know of no one that is irrigating with the shallow groundwater. Residents that have requested sampling and residents that have annotated concern on the Health Screening Clinic Surveys will be given the opportunity to participate.

Q: Mr. Rice: There was a list sent to the County that listed people that irrigated with the shallow ground water, are you familiar with this?
A: Mr. Porter: This is taken into consideration; about 5 people have annotated that they have irrigated with shallow groundwater and through the SAMHD, it has been determined that these 5 residents are no longer irrigating with the shallow groundwater.

Q: Mr. Quintanilla: Are the pecan trees on base, where the concentrations are high going to be tested? The AF should also sample on base at the General's quarters where the concentration is highest.
A: Mr. Porter: Initially, we need to concentration on the communities concerns first. As for the General's quarters, that was a good concern.

Q: Mr. Quintanilla: Are the pecan trees on-base, where the concentrations are high, going to be tested?
A: Mr. Porter: Initially, we need to concentrate on the community concerns first.

Q: Mr. Weegar: What is the SAMHD's role?
A: Mr. Porter: They have experience in dealing with the community and will be conducting the initial screening for the particular vegetables that the residents are growing and whether they can be sampled.

Q: Mr. Quintanilla: The SAMHD has provided 800 health screenings and have gathered information on gardens and the location of the residents.
A: Mr. Porter: The clinic data is the initial screening list for potential participants.

Q: Dr. Lene: Is there not data and literature on similar studies?
A: Mr. Porter: Very little data is available due to the type of produce we are sampling and the chemicals of concern. Hill AFB did conduct a study that showed minimal uptake by tomato produce, but this was a controlled environment.

Q: Mr. Rice: What contaminants will be tested?
A: Mr. Porter: TCE, PCE, and their daughter products

Q: Mr. Rice: What about heavy metals?.
A: Mr. Porter: There is not a heavy metal plume.

Q: Mr. Rice: There are some hot spots with nickel and chromium. What is the detection limit?
A: A low detection limit for water, 1 ppb that would correlate to the low teens for the produce media.

Q: Mr. Quintanilla: A map shows high concentrations of Chromium and Nickel.
A: Mr. Porter: We will have to look at the map and address that concern.

IV. Presentation on Radium Investigation Update

Mr. Jack Shipman presented a briefing on the update for three priority sites, Building 326, Building 375-2LM, and Building 324. The briefing concentrated on B326. The current status for B326 is that radium contamination is above action levels for the interior and exterior. The interior delineation was completed as of 21 September 2001. The highest readings found under the crawlspace of the locker room. Exteriorly, 80+ sanitary/storm sewer, water and electric manholes were investigated. There are 2 impacted sanitary manholes and 1 water valve manhole. The shallow groundwater analysis from wells near the perimeter showed no impact. The Former Kelly WWTP's sludge drying beds are impacted but the off-base City WWTP had not been impacted. A characterization report is due approximately 1 October 2001. The comment period will be from 9 October – 9 November 2001. The remediation is projected to begin in 3 months, approximately January 2002.

Q: Dr. Lene: Why is the contamination so high in the crawlspace?
A: Mr. Shipman: We think that the locker room was right there and there was crawlspace for the plumbing. Showers were taken here and tools washed here.

Q: Mr. Lampright: What type of radiation is this?
A: Mr. Shipman: I am not a health physicist, but my contractor probably takes a combination readout.

Q: Mr. Weeger: 8 x background how does that equate to the 100 mrem/yr?
A: Mr. Shipman: It differs for each situation depending on the background.

Q: Mr. Weeger: 100 mrem/yr, that is the dosage? Yes.
A: Mr. Rice: This is always a confusing point because you have to add the background contamination.
Q: Mr. Quintanilla: How much will this cost for all 3 buildings?
A: Mr. Shipman: B326: $3 million; B375: $100,000 and B324: 2-3 million

Q: Mr. Rice: How did the radium get in there?
A: Mr. Shipman: Probably poor housekeeping, small spills, coupled with mop skinks and floor drains.

V. Review of Latest Draft of Plume Maps for Public Distribution

Mr. William Ryan presented the draft plume maps and opened the matter for discussion.

Discussion:

Q: Mr. Rice: It seems like the other versions were easier to read, clearer and crisper. Is this the way you to intend to reproduce them?

A: Ms. Myrick: These are color copies, the other ones are from plotter printers. Currently, 50 copies will be produced, maybe more.

Q: Mr. Rice: Are you going to put them on the web in PDF format?

A: Ms. Myrick: Yes, that is a good idea. We had planned on doing this, there has been a congressional request do such.

PCE Map:

It was brought up that the word Olympic should be capitalized, it is a proper name. It was determined that AFBCA would follow the Associated Press Style Guide on this issue for all maps. The contour lines < 1 should be <5.

TCE Map:

Nickel is misspelled. The contour lines < 1 should be <5.

Vinyl Chloride Map:

Area between light and blue should be 2-10. The word "line" needs to be taken out. States that there is no knowledge of anyone drinking from the shallow groundwater.

Total VOC Map:

It was determined that this map would be the one that the City Council Boundaries are placed. The map will be renamed to Total Volatile Compounds with the COC in parenthesis. The contour lines < 1 should be <5.

Miscellaneous Map Discussion:

The statement "The Shallow Groundwater is not known to be used for dinking..." will be placed on all maps. All maps will be mounted and available for the RAB meetings. It was determined that the maps would not be mailed out due to cost effectiveness, but would be on display at the RAB meeting where people could sign up to receive a copy of the maps. The maps will also be posted to the web site, and a distribution list will be developed to include ideas such as placement at local entities (schools, clinics, etc.)

VI. Discussion on RAB/TRS Recommendation for Zone 4 Remedy

It was determined that the RAB should make a formal presentation to the San Antonio City Council, regarding the RAB recommendation for a Zone 4 Remedy. The development of RAB recommendations and the presentation will be put on the RAB agenda for 16 October 2001. This will allow Dr. Lene to present the recommendations to the City Council on 18 October 2001.

V. Administrative:

A. BCT meeting update.

1. BCT notes will be in the RAB handouts.
2. Redevelopment
   a. Working to get people into Bldg. 171
   b. Meet with Edgewood School District Superintendent to discuss the usage of approximately 10 acres in the northern corner of former Kelly AFB, on Growdon Rd.
   c. Reuse of building 1575 for Boeing.
3. Zone 5 Interim Actions
   a. Plan for next year is to address TCE south of Growdan.
   b. Originally proposed a pump and treat, now looking at a reactive wall along side Bldg. 1533. The wall will have iron filings.
4. Zone 2/3 Actions
   a. Interim actions: Containment (Zone 2); site E1: old electric plating evaporation pit.
   b. Interim action: Soil removal, containment and or wall for Bldg.
   c. Discussion on the property that was realigned to LAFB. The Compliance Plan still shows Kelly as responsible, but LAFB Environmental was handling the golf course.

B. Spill Report. **No spills**

C. Documents delivered to TRS: Pending

D. Action Items:
1. Mr. Quintanilla would like the Chromium and Nickel levels for Building 301.
2. Mr. Quintanilla asked for more data on the 301 project at the next TRS.
3. George Rice requested that the members receive the minutes earlier for their review

E. Agenda for Next Meeting: No items were discussed.

F. Next TRS meeting: The next meeting will be 15 November 2001. Location to be determined.

Adjournment: The meeting adjourned at 9 p.m.

11S

Minutas de la Junta

Subcomité de Revisión Técnica (TRS, por sus siglas en inglés) de la Base de la Fuerza Aérea Kelly

Junta Asesora de Restauración de Kelly (RAB, por sus siglas en ingles)

26 de septiembre de 2001, Biblioteca Cortez,
2803 Hunter Road
Dr. Gene Lené, Copresidente representando a la comunidad en el TRS

Asistentes:

Dr. Gene Lené, Copresidente representando a la comunidad	Sr. John Glass, AFBCA
Sr. George Rice, Miembro representando a la comunidad	Sr. Scott Lampright, Jefe de bomberos del Condado de Bexar
Sr. Dan Zatopek, AFBCA	Sr. Chuck Meshako, AFBCA
Sr. Dough Karas, AFBCA	Sr. Val Martínez, BA&H
Sr. Robert Miller, Booz Allen & Hamilton (BA&H, por sus siglas en inglés)	Srta. Tracy McLoughlin, BA&H
Srta. Lynn Myrick, BA&H	Srta. Vanesa Musgrave, AFCEE
Sr. William Ryan, AFBCA	Sr. Ron Porter, Mitretek
Sr. Mark Weegar, TNRCC	Srta. Laura Stankosky, EPA
Sr. Armando Quintanilla, Miembro representando a la comunidad	

I. Introducción: La reunión empezó a las 6:42 de la tarde.

El Sr. Dan Zatopek propuso una pregunta de revisión con relación a la Zona 4. La orden original de la Asistencia Técnica para la Participación Pública (TAPP por sus siglas en inglés) de 1999 era para la revisión del resumen ejecutivo del borrador final del informe de la Zona 4. La Agencia de Conversión de Bases de la Fuerza Aérea (AFBCA por sus siglas en inglés) desea comentarios del TRS con relación a si el contratista necesita revisar el informe completo. El revisar el informe completo cambiaría el alcance del trabajo y el estimado de costos original. Las otras dos opciones son que el contratista se enfoque en la Unidad Operable (OU) 2 de la Zona 4 o solamente reagruparse y empezar nuevamente.

Discusión

El Sr. George Rice: Proporcionar el documento más grande al contratista para referencia y hacer que se enfoquen en la OU 2.

El TRS decidió proporcionar el informe completo para propósitos de referencia y hacer que el contratista revise solamente la porción de OU 2.

II. Presentación sobre el Reciclado de los Materiales del Edificio 301

DRAFT MEETING MINUTES

KELLLY AFB TECHNICAL REVIEW SUBCOMMITTEE (TRS) TO THE RESTORATION ADVISORY BOARD (RAB)

14 August 2001, Las Palmas Library
515 Castroville Road
Dr. Gene Lené, TRS Chairman

Attendees

Dr. Gene Lené, Chairman, Community Member
Mr. George Rice, Community Member
Ms. Kyle Cunningham, SAMHD
Ms. Laura Stankosky, EPA
Mr. Sam Murrah, Community Member
Mr. Robert Silvas, Community Member
Mr. Názirite Pérez, Community Member
Mr. Scott Lampright, Community Member
Mr. William Ryan, AFBCA
Mr. Dan Zatopek, AFBCA
Mr. Doug Karas, AFBCA
Mr. Chuck Meshako, AFBCA
Mr. Jack Shipman, AFBCA
Major Dan Caputo, AFIERA
Mr. Brian Renaghan, AFIERA
Mr. Roy Botello, Community Member
Mr. Paul Person, Community Member
Mr. Armando Quintanilla, Community Member
Mr. Mark Weegar, Community Member
Mr. Nick Rodriguez, Community Member
Mr. Bob Mueller, NJDEP
Ms. Abigail Power, TNRCC
Ms. Tanya Lopez, TNRCC
Mr. Brendan Smith, BA & H
Ms. Lynn Myrick, BA & H
Mr. Eddie Martinez, BA & H
Mr. David Smith, BA & H
Ms. Heather Hoerdemann, BA & H
Ms. Meg Schnebly, BA & H
Mr. Scott Courtney, BA & H

I. Introduction

The meeting began at 6:34 p.m. Mr. George Rice had two comments on the minutes from the June 12 TRS meeting. He stated that there was not a Roman numeral four following Roman numeral three. Additionally, Mr. Rice stated that the notes from Mr. John Folk-Williams were to be mailed to the community members as soon as the notes were located.

II. Presentation on the Optimization of Wells on East Kelly

Mr. Scott Courtney, BA & H, presented preliminary results of the effort to evaluate and optimize the hydraulic containment system installed on East Kelly. Mr. Courtney discussed the project objectives, data collection and evaluation, and preliminary results. The project objectives were as follows: evaluate the system ability to contain the groundwater, and optimize the system flow rates to operate efficiently. The data collection and evaluation involved measuring water levels in 80 groundwater monitoring wells, measuring the drawdown and flow rates from the horizontal and vertical recovery wells, preparing and evaluating water level maps, and collecting and evaluating groundwater analytical data. The data collected were used to refine and calibrate the Zone 4 Zoom groundwater model for the purposes of simulating various flow regimes to predict responses and compare to actual conditions. The model can also generate particle track simulations to aid in the evaluation of the capture zone. Based on the observed responses and model simulations, the system will be optimized. Preliminary observations indicate the system is

performing as designed and only minor modifications to flow rates would be required to optimize the system. A report will be prepared this fall presenting all the results and recommendations from the project. A question and answer session followed the presentation.

III. Presentation on Radium in Buildings 324 and 326

Major Dan Caputo presented information on the ongoing investigation of radium contamination in the sanitary sewer system from Buildings 324 and 326. He explained that these buildings once used paint that contained radium and have radiation levels above background levels. This led to an investigation of the sewer system. The investigation had surveyed 81 sewer and utility manholes and found three impacted by the radium at low levels. Radium above background levels was also found in an old sludge drying bed in the southwest portion of the base. Currently, data are being gathered so that a plan can be devised to remediate the sites. Information on Relative Radiological Risk Assessment was presented.

IV. Review of Second Draft of Plume Maps for Public Distribution

Mr. William Ryan, AFBCA, reviewed the changes submitted by the committee members during the June TRS meeting. Members were pleased with the changes and made the additional following recommendations:

- The dashed green lines on the TCE map should match – make estimated lines the same style
- Replace "typically" with "known to be" in the last sentence of paragraph 4 in each map
- Fix typos on all three maps
- Change the explanation of ppb from the gasoline tanker example to the Olympic swimming pool example
- Change the term "shaded areas" to "contoured areas" in paragraph two of all three maps
- Place the words "for example" in front of the second line in paragraph two of the Metals map

V. Administrative

A. BCT meeting update. Mr. William Ryan gave update to Dr. Lené.
B. Spill Report. No spills
C. Documents delivered to RAB
   1. Draft Zone 4 OU-2 Human Health Risk Assessment
   2. Draft Tier 2 Ecological Risk Assessment
   3. Final Semiannual Compliance Plan report for Jul 01 (Jan-Jun01) (vol 1)
   4. Replacement Pages for the Draft Final CMI Dated 12/98
D. Action items
   1. Mr. George Rice requested a copy of the detailed notes written by Mr. John Folk-Williams, the previous facilitator, at the April TRS meeting (Poss March TRS?). He asked that the notes be mailed to the committee members when found.
   2. Mr. Rice requested that BCT reports be presented in the RAB materials packages
E. Agenda for next meeting: No items were discussed.
F. Next TRS meeting: The next TRS meeting will take place at 6:30 p.m. on September 11, 2001. Location is to be determined.

G. Final discussions: Mr. Armando Quintanilla asked what the status of the RFI for Zone 4 is. Mr. Mark Weegar replied that the evaluation is being conducted and should be completed by the end of September.

Adjournment
The meeting adjourned at 8:57 p.m.

B301 Removal

Update on Recycling

26 September 2001

B301 Removal

- Equipment Removal
  - Reuse
    - Miscellaneous property (i.e. tanks, vats, cranes, etc.)
  - Recycle
    - 680 tons steel recycled after decon
  - Disposal
    - Some steel sent to disposal if decon unsuccessful
    - Miscellaneous debris

B301 Removal

- Building Removal - Current
  - Recycle
    - Mercury containing lights & switches
    - Batteries
  - Disposal
    - Basement concrete (~7000 tons) Hazardous, Class II
    - Decon water (~75,000 gals) Hazardous
    - Decon Sludge (~60 yds) Hazardous

B301 Removal

- Building Removal - Pending
  - Subcontractor discretion to recycle or dispose
  - Disposal classification Class II if not recycled
  - Debris
    - Structure concrete (~15K-20K tons)
    - Steel (~2.5K tons)
    - Other (i.e. copper, lumber, etc.)

Kelly AFB

Integrity - Service - Excellence

TRS Briefing
26 Sep 01
Radiation Sites

U.S. AIR FORCE

U.S. AIR FORCE

3 Priority Sites

- B326 Former Instrument Dept/Radium Paint Shop (1942-52)
  - Investigation completed - 21 Sep
- B375-2LM Former Flight Controls Shop (1977-94)
  - Remediation complete - 28 Sep
- B324 Former Instrument Dept/Radium Paint Shop (1934-42)
  - Investigation contract to be awarded Dec 01

U.S. AIR FORCE

B326 Radium Paint Shop (1942-52)

- Current Status - Radium contamination above action levels has been found both inside B326 and exterior to the bldg in sewer lines and Former South Kelly WWTP
- Interior - Delineation is complete as of 21 Sep. Most of the 1st and 2nd floors are impacted above action levels.
  - Highest Readings - Crawlspace under former shop locker room - 1M counts/100cm^2, BG = 5000 counts (200x BG) (Not accessible to public)

U.S. AIR FORCE

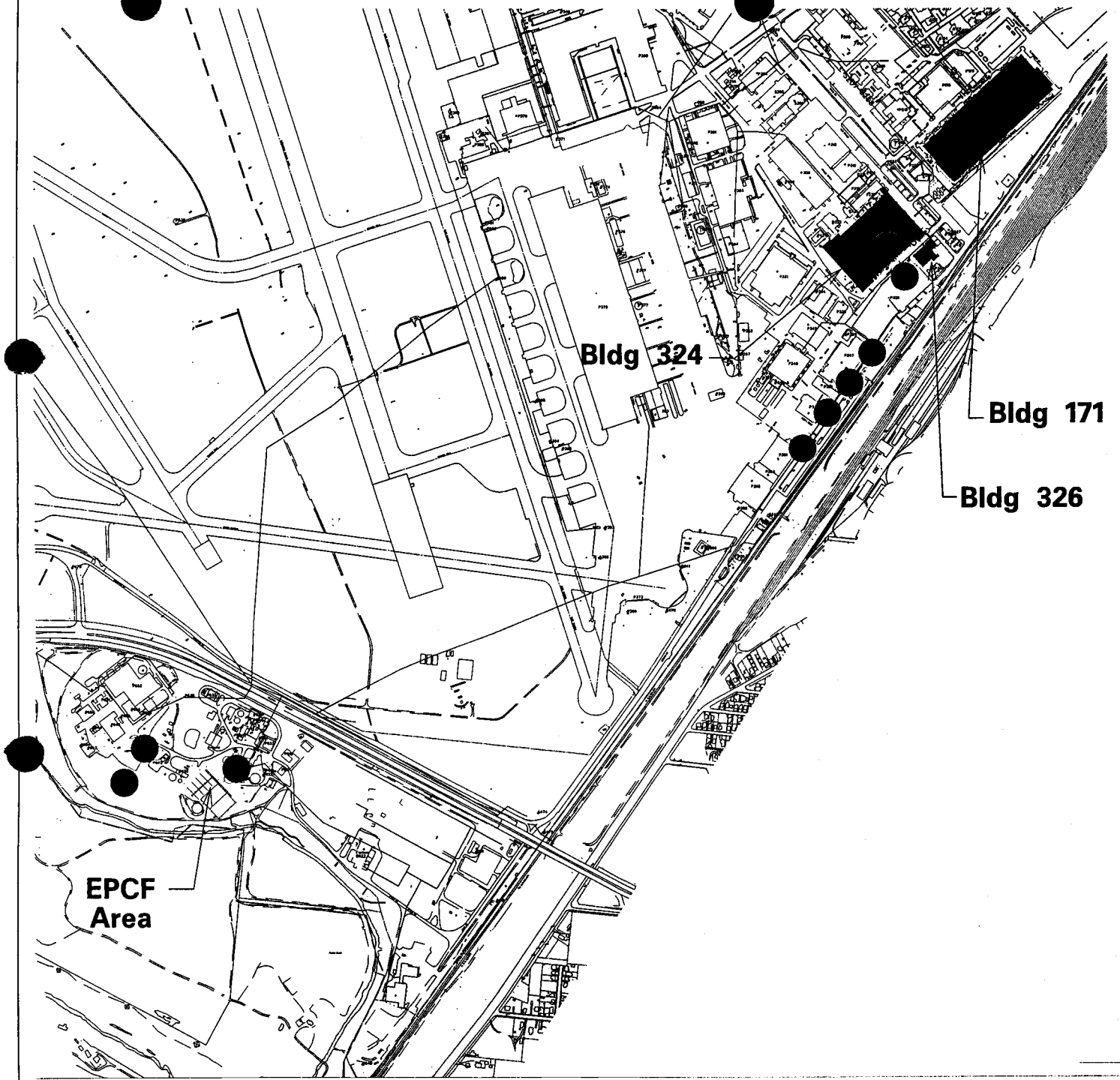
B326 Radium Paint Shop (Cont)

- Exterior - Investigated 80+ Sanitary/Storm Sewer, Water and Electric manholes
  - 2 impacted sanitary manholes (8X BG) (Are accessible to SAWS workers)
    - 100 mrem/yr dosage to SAWS worker if he stayed in this manhole for 40hrsX50wks = 2000 hrs/yr
  - 1 impacted water valve manhole
  - Several locations along UG sanitary line mains along Berman Rd. near 326 and 329 are elevated
  - Stormwater UG lines and concrete lined ditch to outfall 002 - not impacted
- Shallow GW analysis from wells near perimeter of B326 - not impacted

U.S. AIR FORCE

B326 Radium Paint Shop (Cont)

- Former Kelly WWTP sludge drying beds (1940s-50s) - are impacted
  - 3 elevated areas of surface soil in IRP sites SD-2 & FC-2, & near B620
- Off-base City of SA WWTPs (Dos Rios and Leon Creek) surveyed and soil sampled - not impacted
- Characterization Report due ~ 1 Oct
  - Sewerline options will be included:
    - Complete removal/replacement, or Leave in place/Deed Record
  - Comment period, decision meetings will include AF, EPA, TDH, TNRCC, GKDA, SAWS, etc. (9 Oct - 9 Nov)
- Remediation projected to begin in ~ 3 months (Jan 02)



LEGEND

Sanitary Sewer Line

Impacted With Radiation

600 0 1200

SCALE IN FEET

KELLY AFB RADIUM PAINT SHOP, BLDG 326, RADIATION INVESTIGATION

SEPTEMBER 26, 2001

AIR FORCE
BASE CONVERSION AGENCY
KELLY AFB, TX

File: KELLY-USAFB\UTIL-SAN-SEWER\LOC-SS-IMPACTED.DGN

Edited By: AFBCA/RPortales SEPT 26 2001

(PCE, TCE, 1,2 DCE and Vinyl Chloride) Total Volatile Compounds 1999–2000

LEGEND

- Transferred to Lackland Air Force Base July 14, 2001.
- Air Force Base Conversion Agency Area of Responsibility Property to be transferred to Greater Kelly Development Authority.
- < 1 parts per billion
- 5 – 10 parts per billion
- 10 – 100 parts per billion
- 100 – 200 parts per billion
- 200 + parts per billion
- 1 part per billion (ppb) line
- Creek
- River
- Railroad
- Groundwater Flow

LAFB

AFBCA

AFBCA

1) The figure was prepared using sample data from 1999 and 2000. This figure presents an overall picture of the Volatile Total Organic Compounds within the shallow groundwater.

2) The contoured areas were created using samples taken from specific wells. The boundaries are determined based on well location and sample results. The level of individual chemicals are specifically measured for each well, but levels of individual chemicals for the area between wells must be estimated.

3) Dashed lines - - - - - depict the estimated plume boundary.

4) Total Volatile Organic Compounds – Tetrachloroethene (PCE), Trichloroethene (TCE), 1,2 Dichloroethene (1, 2 DCE) and Vinyl Chloride. The shallow groundwater is not known to be used for drinking near former Kelly Air Force

5) Parts per billion (ppb) is the measurement of the concentration of chemicals in water. For example, one drop of water in an olympic–sized swimming pool is about 1 part per billion.

Developed by the Kelly Restoration Advisory Board with AFBCA support. Please contact Kelly Public Involvement at 925–0956 with questions or comments.

DATA SOURCES

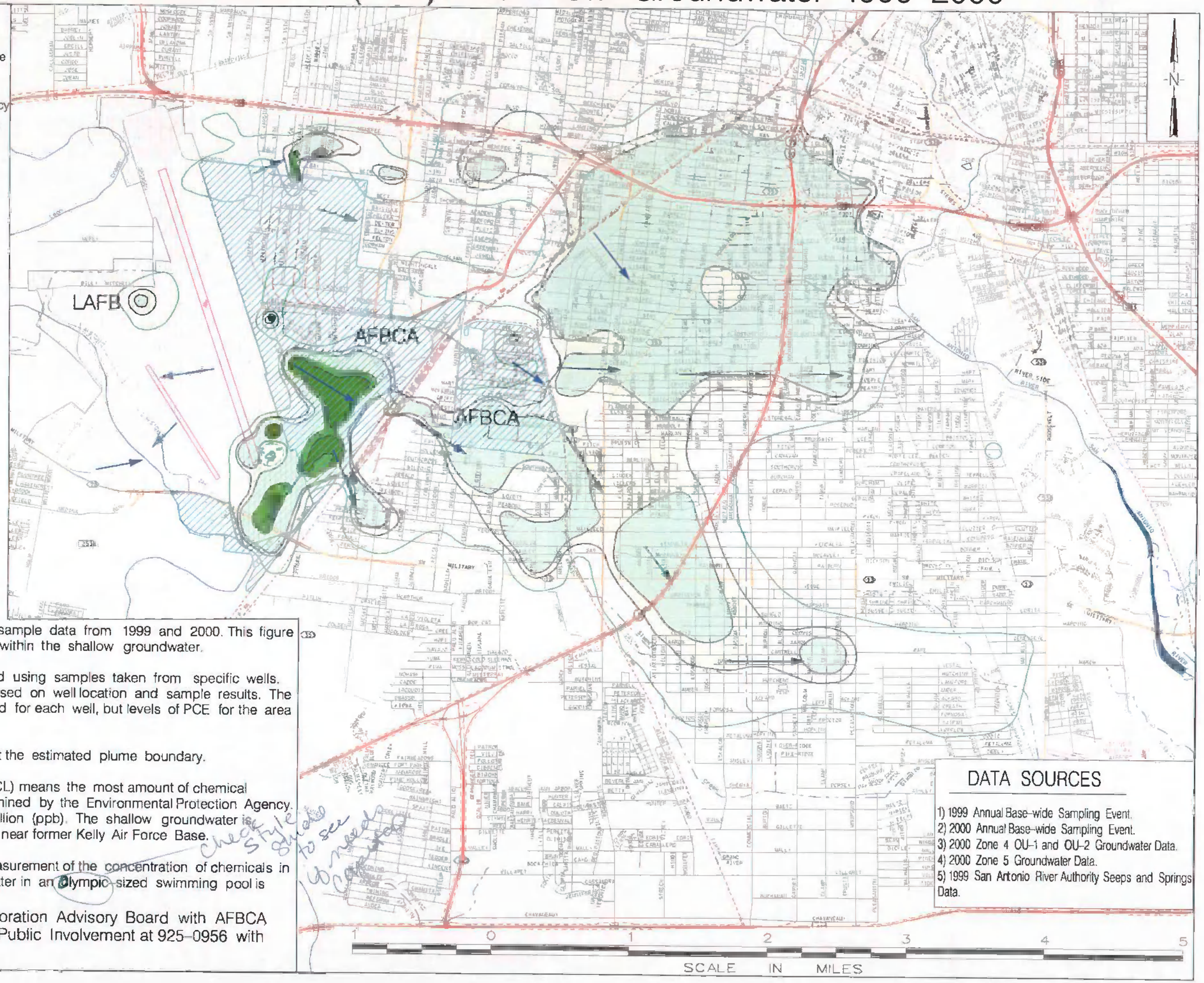
1) 1999 Annual Base–wide Sampling Event.
2) 2000 Annual Base–wide Sampling Event.
3) 2000 Zone 4 OU–1 and OU–2 Groundwater Data.
4) 2000 Zone 5 Groundwater Data.
5) 1999 San Antonio River Authority Seeps and Springs Data.

1 0 1 2 3 4 5

SCALE IN MILES

This one gets City Council lines

Tetrachloroethene (PCE) in Shallow Groundwater 1999–2000



LEGEND

- Transferred To Lackland Air Force Base July 14, 2001.
- Air Force Base Conversion Agency Area of Responsibility. Property to be transferred to Greater Kelly Development Authority.
- < 1 part per billion
- 5 – 10 parts per billion
- 10 – 100 parts per billion
- 100 – 200 parts per billion
- 200 + parts per billion
- 1 part per billion (ppb) line
- Creek
- River
- Railroad
- Groundwater Flow

1) The figure was prepared using sample data from 1999 and 2000. This figure presents an overall picture of PCE within the shallow groundwater.

2) The contoured areas are created using samples taken from specific wells. The boundaries are determined based on well location and sample results. The level of PCE is specifically measured for each well, but levels of PCE for the area between wells must be estimated.

3) Dashed lines – – – – – – depict the estimated plume boundary.

4) Maximum Contaminant Level (MCL) means the most amount of chemical allowed in drinking water as determined by the Environmental Protection Agency. The MCL for PCE is 5 parts per billion (ppb). The shallow groundwater is not known to be used for drinking near former Kelly Air Force Base.

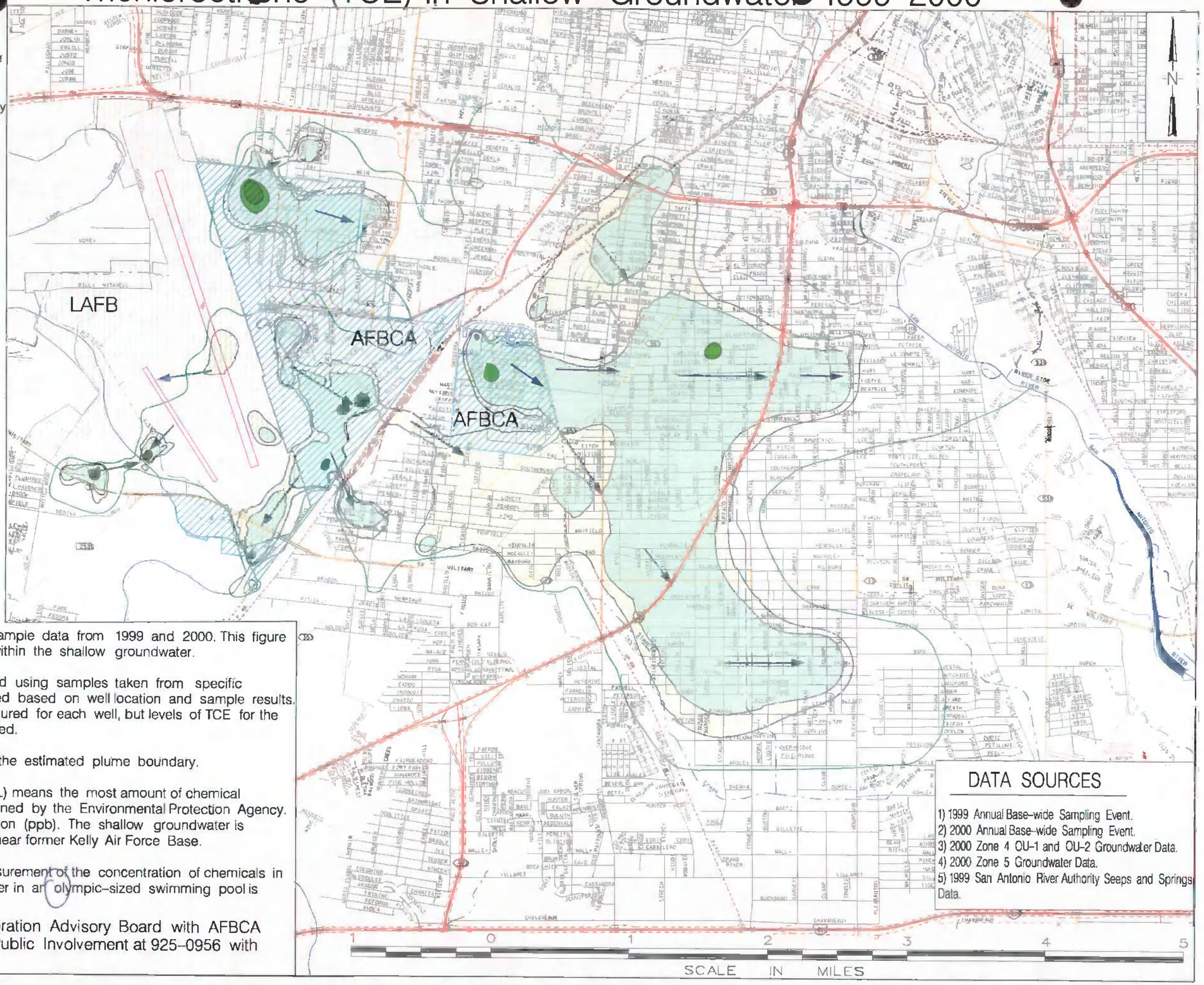
5) Parts per billion (ppb) is the measurement of the concentration of chemicals in water. For example, one drop of water in an Olympic sized swimming pool is about 1 part per billion.

Developed by the Kelly Restoration Advisory Board with AFBCA support. Please contact Kelly Public Involvement at 925–0956 with questions or comments.

DATA SOURCES

1) 1999 Annual Base-wide Sampling Event.
2) 2000 Annual Base-wide Sampling Event.
3) 2000 Zone 4 OU-1 and OU-2 Groundwater Data.
4) 2000 Zone 5 Groundwater Data.
5) 1999 San Antonio River Authority Seeps and Springs Data.

Trichloroethene (TCE) in Shallow Groundwater 1999–2000



LEGEND

- Transferred To Lackland Air Force Base July 14, 2001.
- Air Force Base Conversion Agency Area of Responsibility. Property to be transferred to Greater Kelly Development Authority.
- < 1 part per billion
- 5 – 10 parts per billion
- 10 – 100 parts per billion
- 100 – 200 parts per billion
- 200 + parts per billion
- 1 part per billion (ppb) line
- Creek
- River
- Railroad
- Groundwater Flow

1) The figure was prepared using sample data from 1999 and 2000. This figure presents an overall picture of TCE within the shallow groundwater.

2) The contoured areas were created using samples taken from specific wells. The boundaries are determined based on well location and sample results. The level of TCE is specifically measured for each well, but levels of TCE for the area between wells must be estimated.

3) Dashed lines – – – – – depict the estimated plume boundary.

4) Maximum Contaminant Level (MCL) means the most amount of chemical allowed in drinking water as determined by the Environmental Protection Agency. The MCL for TCE is 5 parts per billion (ppb). The shallow groundwater is not known to be used for drinking near former Kelly Air Force Base.

5) Parts per billion (ppb) is the measurement of the concentration of chemicals in water. For example, one drop of water in an olympic–sized swimming pool is about 1 part per billion.

Developed by the Kelly Restoration Advisory Board with AFBCA support. Please contact Kelly Public Involvement at 925–0956 with questions or comments.

DATA SOURCES

1) 1999 Annual Base–wide Sampling Event.
2) 2000 Annual Base–wide Sampling Event.
3) 2000 Zone 4 OU–1 and OU–2 Groundwater Data.
4) 2000 Zone 5 Groundwater Data.
5) 1999 San Antonio River Authority Seeps and Springs Data.

Metals, Chlorobenzene, Benzene 2000

LEGEND

- Transferred To Lackland Air Force Base July 14, 2001.
- Air Force Base Conversion Agency Area of Responsibility. Property to be transferred to Greater Kelly Development Authority.
- Arsenic (MCL=50 ppb)
- Chromium (MCL=100 ppb)
- Manganese (MCL=50 ppb)
- Nickle (MCL=100 ppb)
- Benzene (MCL=5 ppb)
- Chlorobenzene (MCL=100 ppb)
- Creek
- River
- Railroad
- Groundwater Flow

LAFB

AFBCA

AFBCA

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1) The figure was prepared using sample data from April/June 2000. This figure presents an overall picture of Arsenic, Chromium, Maganese, Nickel, Benzene and Chlorobenzene within the shallow groundwater.

2) The contoured areas are created using samples taken from specific wells. For example, the boundaries are determined based on well location and sample results. The level of Metals, Benzene and Chlorobenzene is specifically measured for each well.

3) Maximum Contaminant Level (MCL) means the most amount of chemical allowed in drinking water as determined by the Environmental Protection Agency. The MCL for Benzene is 5 parts per billion (ppb). The shallow groundwater is not known to be used for drinking near former Kelly Force Base.

4) Parts per billion (ppb) is the measurement of the concentration of chemicals water. For example, one drop of water in an olympic-sized swimming pool is about is about 1 ppb.

Developed by the Kelly Restoration Advisory Board with AFBCA support. Please contact Kelly Public Involvement at 925-0956 with questions or comments.

DATA SOURCES

1) 2000 Annual Base-wide Sampling Event.

1 0 1 2 3 4 5

SCALE IN MILES

Vinyl Chloride (VC) in Shallow Groundwater 1999–2000

LEGEND

- Transferred to Lackland Air Force Base July 14, 2001.
- Air Force Base Conversion Agency Area of Responsibility Property to be transferred to Greater Kelly Development Authority.
- 2 – 10 parts per billion (ppb) line
- 10 – 100 parts per billion
- 100 – 1000 parts per billion
- 1000 + parts per billion
- Creek
- River
- Railroad
- Groundwater Flow

LAFB

AFBCA

AFBCA

1) The figure was prepared using sample data from 1999 and 2000. This figure presents an overall picture of Vinyl Chloride within the shallow groundwater.

2) The contoured areas are created using samples taken from specific wells. The boundaries are determined based on well location and sample results. The level of Vinyl Chloride is specifically measured for each well, but levels of Vinyl Chloride for the area between wells must be estimated.

3) Dashed lines – – – – – depict the estimated plume boundary.

4) Maximum Contaminant Level (MCL) means the most amount of chemical allowed in drinking water as determined by the Environmental Protection Agency. The MCL for Vinyl Chloride is 2 parts per billion (ppb). The shallow groundwater is not known to be used for drinking near former Kelly Force Base.

5) Parts per billion (ppb) is the measurement of the concentration of chemicals in water. For example, one drop of water in an olympic-sized swimming pool is about 1 part per billion.

Developed by the Kelly Restoration Advisory Board with AFBCA support. Please contact Kelly Public Involvement at 925-0956 with questions or comments.

DATA SOURCES

1) 2000 Annual Base-wide Sampling Event.

NOTE:
Due to the limited extent of Vinyl Chloride, no additional data sources were used to develop this figure.

1 0 1 2 3 4 5

SCALE IN MILES

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE