



KELLY AFB  
TEXAS

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ADMINISTRATIVE RECORD  
COVER SHEET

AR File Number 3285

**KELLY RESTORATION ADVISORY BOARD**  
**TECHNICAL REVIEW SUBCOMMITTEE**  
**REVISED MEETING AGENDA**  
**Tuesday, 11 July 2000, 6:30 P.M.**  
**St. Mary's University, Garni Science Hall**

<b>I. Introduction</b>	6:30 - 6:35	Dr Lené
A. Agenda Review and Handouts		
<b>II. Quintana Road Update</b>	6:35 -6:55	City Representative
<b>III. Zone 4 Horizontal Well Update</b>	6:55 - 7:10	Mr. Matthews, BCA
<b>IV. Low Level Radioactive Material and Waste Storage Sites</b>	7:10 - 7:35	Capt. Cornell, AFIERA Radioactive & Mixed Waste Office
<b>V. Administrative</b>	7:35 - 8:00	Dr Lené
A. BCT Update		
B. Spill Summary Report		
C. Documents to TRS/RAB		
D. Action Items		
E. Agenda/Location/Time of Next TRS Meeting		
<b>VI. Adjournment</b>	8:00	

July 2000

**MEETING MINUTES**

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

11 July 2000, St. Mary's University, Garmi Science Hall  
Dr. Lené, TRS Chairman

- I. Introduction:** The TRS meeting began at 6:40 p.m. Attachment 1 is the attendance report.
  
- II. Quintana Road Update:** Ms. Susan Crane, City of San Antonio Public Works, presented an update on the Quintana Road Project. (See Attachment 2)
  - A. The project is ahead of schedule and under budget.
  - B. A field alteration has been approved by City Council allowing the addition of King Street to the project. The King Street addition will include street reconstruction, underground drainage, and some sanitary sewer replacement from Bynum to New Laredo Highway.
    - 1. This action will reduce overall cost, mitigates more of the plume along King Street, and delivers a completed project for the entire area.
    - 2. Ms. Crane said the King Street work will use current funds generated by under-runs on the Quintana Road Project.
  
- III. Zone 4 Horizontal Well Update:** Mr. Charlie Matthews, Base Conversion Agency (BCA), informed the committee the East Kelly wells and Water Treatment Facility has been completed and is undergoing the final fine tuning before turnover to the Operating Contractor. (See Attachment 3)
  - A. The treatment system is similar to what is currently used on main Kelly AFB. Initially, the clean water will be discharged into Sixmile Creek. Ultimately, the water will be used for landscape wastewater and other industrial uses.
  - B. The entire system is operated at the Water Treatment Facility; however, the system can be remotely monitored and operated from several locations including the homes of the Program Manager and the contractor's operators in addition to the other Kelly AFB Water Treatment Facility.
  - C. It was pointed out the system is interim source control action and is not the final solution.
  
- IV. Low Level Radioactive Material and Waste Storage Sites:** Mr. Jack Shipman, BCA, reported on the initial results of investigation conducted on Kelly AFB for low level radioactive contamination. All sites are scheduled to be remediated by the year 2002 to below USEPA's clean up levels and also to levels indistinguishable from background radiation levels. (See Attachment 4)
  - A. The investigation located 27 sites having radioactivity from electron tubes used in aircraft electronic equipment and/or radium paint. The sites are at very low-levels and are no threat to human health or the environment
  - B. Surveys were conducted at 18 sites from 1998 through 1999. Five sites showed slightly elevated radiation levels needing remediation.
    - 1. Two sites were remdiated in January, one will be completed in October, and two will be remediated in 2001.

2. Nine sites will be surveyed in 2001. Four sites have minor sources ( i.e., electron tubes in electronic equipment). One site is a large warehouse that served as the main Kelly AFB Radioactive Material Storage Building. Four other sites were former radium paint shops. Of the four paint shops, two are under action levels and two will be remediated in 2001.

#### V. Administrative

- A. Base Conversion Team (BCT) handouts were presented to Dr. Lené. (See Attachment 5) Mr. Ryan told the committee BCT was told the Zone 4 RFI would be delivered to Texas Natural Resource Conservation Commission in October 2000 and the Zone 4 CMS should follow in March 2001.
- B. Spill Summary Report: There were three minor spills during the month of June 2000. (See Attachment 6)
- C. Documents to TRS/RAB: No new documents. (See Attachment 7)
- D. Action Items:
  1. Mr. Quintanilla asked if radiation had been found in Leon Creek fish. Mr. Shipman said he would check.
- E. Next TRS meeting: The next TRS meeting will be held 8 August 2000 at 6:30 p.m. at St. Mary's Garni Science Hall.
- F. Other Administrative Items:
  1. RAB members were notified the next RAB meeting will be 29 August 2000 and a special RAB meeting has tentatively been scheduled for 1 August 2000.

#### IV. Adjournment: The TRS adjourned at 8:20 p.m.

#### Attachments:

1. Attendance Report
2. Quintana Road Project Update
3. Zone 4 Horizontal Well Update
4. Low Level Radioactive Material and Waste Storage Sites Presentation
5. BCT Minutes and Handouts, July 2000
6. Spill Summary Report
7. Documents List

**18S**  
**MINUTAS DE LA JUNTA**

SUBCOMITÉ DE REVISIÓN TÉCNICA (TRS, por sus siglas en inglés) DE LA BASE  
DE LA FUERZA AÉREA KELLY

PARA LA JUNTA ASESORA DE RESTAURACIÓN DE KELLY (RAB, por sus siglas  
en inglés)

11 de julio, 2000, Universidad de St. Mary's, Garni Science Hall  
Dr. Gene Lené, Copresidente del TRS

- I. Introducción:** La junta del TRS (se inició a las 6:40 p.m. El Documento Adjunto # 1 es el informe de asistencia. **[NOTA DEL TRADUCTOR: El documento original en inglés no tenía documentos adjuntos].**
- II. Actualización de la Calle Quintana:** La Srta. Susana Crane, del Departamento de Obras Públicas de la Ciudad de San Antonio, presentó una actualización del Proyecto de la Calle Quintana. (Ver Documento Adjunto # 2).
- A. El proyecto va más avanzado de lo que se había programado y está dentro del presupuesto.
  - B. El Ayuntamiento de la Ciudad ha aprobado una alteración al trabajo de campo para que se pueda agregar la Calle King a este proyecto. Esta adición de la Calle King incluirá la reconstrucción de la calle, el drenaje subterráneo y algunos reemplazos de drenaje sanitario de Bynum a la Nueva Carretera Laredo.
    - 1. Esta actividad reducirá el costo total, mitigará más la pluma a lo largo de la Calle King, y entregará un proyecto completo para toda el área.
    - 2. La Srta. Crane dijo que el trabajo de la Calle King iba a utilizar los fondos actuales generados por los remanentes del Proyecto de la Calle Quintana.
- III. Actualización del Pozo Horizontal de la Zona 4:** El Sr. Charlie Mathews, de la Agencia de Conversión de Bases de la Fuerza Aérea (AFBCA, por sus siglas en inglés), le informó al Comité que los pozos de East Kelly y las Instalaciones de Tratamiento de Agua se han terminado y que se están realizando los detalles finales antes de entregárselo al Contratista Operativo (Ver Documento Adjunto # 3).
- A. El sistema de tratamiento es similar al que se usa actualmente en la Base Principal de la Fuerza Aérea de Kelly. Inicialmente, el agua limpia se va a descargar en el Six Mile Creek. Con el tiempo, el agua se utilizará como aguas residuales para jardinería ornamental y otros usos industriales.
  - B. Todo el sistema se opera desde las instalaciones de tratamiento de agua. Sin embargo, se puede vigilar el sistema a control remoto y operar desde varios lugares incluyendo las casas de los Gerentes del Programa y / o de los operadores del contratista, al igual que desde las Instalaciones de Tratamiento de Agua de la Base Aérea Kelly.
  - C. Se enfatizó que el sistema es una acción de control interina de la fuente y no es la solución final.

#### **IV. Materiales de Bajo Nivel de Radioactividad y Sitios de Almacenamiento de**

**Desperdicios:** El Sr. Jack Shipman de AFBCA hizo una presentación para reportar los resultados iniciales de la investigación realizada en la Base Aérea Kelly sobre la contaminación de bajos niveles de radioactividad. Se tiene programado que todos los sitios se hayan corregido para el año 2002 y que hayan alcanzado los niveles de limpieza establecidos por la Agencia de Protección Ambiental (USEPA por sus siglas en inglés), al igual que los niveles que no se distingan de los niveles de radiación en el ambiente. (Ver el Documento Adjunto # 4).

- A. La investigación detectó 27 sitios que tenían radioactividad, que van desde los tubos de electrones que se usan en el equipo electrónico de aviones hasta la pintura con radio. Los sitios tienen unos niveles muy bajos y no son de peligro para la salud humana ni para el medio ambiente.
- B. Se realizaron encuestas en 18 de los sitios de 1998 a 1999. Cinco de los sitios mostraron unos niveles de radiación ligeramente elevados que requerían corrección.
  - 1. En enero, se corrigieron dos de los sitios. Uno se terminará en octubre y dos se corregirán en el año 2001.
  - 2. En el año 2001 se hará una encuesta de nueve sitios. Cuatro sitios tienen fuentes menores (por eje., los tubos de electrones en equipo electrónico). Un sitio es un almacén grande que sirvió como el Edificio de Almacenamiento de Material Radioactivo en la Base Principal de Kelly. Otros cuatro sitios eran talleres de pintura, de los cuales dos están bajo los niveles de acción y dos se corregirán en el año 2001.

#### **V. Puntos administrativos:**

- A. Los folletos del Equipo de Conversión de la Base (BCT, por sus siglas en inglés) se le entregaron al Dr. Lené. (Ver el Documento Adjunto # 5). El Sr. Ryan le dijo al Comité que el BCT había dicho que se entregaría la Investigación de la Facilidad bajo RCRA (RFI, por sus siglas en inglés) de la Zona 4 a la Comisión para la Conservación de Recursos Naturales de Texas en marzo de 2001.
- B. Informe del Resumen de Derrames: Hubo tres derrames pequeños en el mes de junio de 2000. (Ver Documento Adjunto # 6).
- C. Documentos que se entregaron al TRS /RAB: No hubo documentos nuevos (Ver Documento Adjunto # 7)
- D. Puntos de Acción:
  - 1. El Sr. Quintanilla preguntó si se había encontrado radiación en los peces de Leon Creek. El Sr. Shipman dijo que iba a verificarlo.
- E. La siguiente junta del TRS: La siguiente junta del TRS será a las 6:30 p.m. del 8 de agosto de 2000 en el Garni Science Hall, de la Universidad de St. Mary.
- F. Otros Puntos Administrativos:
  - 1. Se les notificó a los miembros del RAB que la siguiente junta del RAB sería el 29 de agosto de 2000 y que se había programado tentativamente una junta del RAB para el 1° de agosto de 2000.

**VII. Cierre de la Sesión:** Se cerró la junta del TRS a las 8:20 p.m.

**Documentos Adjuntos:**

1. Informe de asistencia
2. Actualización del Proyecto de la Calle Quintana
3. Actualización del Pozo Horizontal de la Zona 4
4. Presentación de la Información sobre el Material de Bajos Niveles de Radioactividad y Sitios de Almacenamiento de Desperdicios
5. Minutas y folletos del BCT de julio de 2000
6. Informe del Resumen de Derrames
7. Lista de documentos



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SAN ANTONIO AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

10 JUL 2000

MEMORANDUM FOR REMEDIAL ACTION BOARD/TECHNICAL REVIEW  
SUBCOMMITTEE (RAB/TRS)

FROM: SA-ALC/EMC  
307 Tinker Drive, Bldg. 306  
Kelly AFB, TX 78241-5917

SUBJECT: Monthly Spill Report for June 2000

1. There have been three reportable quantity spills for the month of June 2000. These spills have been appropriately addressed and reported to the Texas Natural Resource Conservation Commission (TNRCC) as required by law.
2. On 03 Jun 00, failure of a lift station pump at the Environmental Process Control Facility (EPCF) caused a backup and overflow at the Final Effluent Basin. The release involved treated water containing residual AFFF. The overflow entered Leon Creek at Outfall 001. Visual inspection of Leon Creek did not show any negative impact or loss of aquatic life.
3. On 12 Jun 00, petroleum sheen of less than one gallon was identified at the Outfall 003 basin and tributary leading to Leon Creek. The flow was immediately diverted to the EPCF via the lift station. Oil absorbing pads and booms were deployed. No evidence of the sheen entering the creek was present. Investigation of both Air Force and Contracted work areas could not identify a discharge point.
4. On 14 Jun 00, recovered groundwater containing a trace of Volatile Organic Compounds entered Leon Creek due to a pipe rupture. The groundwater recovery system was immediately shut off. A small amount of runoff entered Leon Creek. The pipe system was repaired and pressure tested. No visible impact to Leon Creek or its aquatic life was observed.

Should you have further questions or require additional information, please contact Mr. Jerry Pantoja at (210) 925-3100 extension 310.

Sincerely

A handwritten signature in black ink, appearing to read "Sean M. O'Brien".

SEAN M. O'BRIEN, Capt, USAF  
Chief, Environmental Compliance Division

AHACH 6





DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SAN ANTONIO AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

Mr. Lawrence O. Bailey Jr.  
SA-ALC/EM  
307 Tinker Drive, Bldg 306  
Kelly AFB, TX 78241-5197

07 JUN 2000

Mr. Richard Garcia  
Texas Natural Resource Conservation Commission (TNRCC)  
Region 13  
140 Heimer Road, Suite 360  
San Antonio, TX 78232-5028

Re: Aqueous Film Forming Foam (AFFF) to Leon Creek

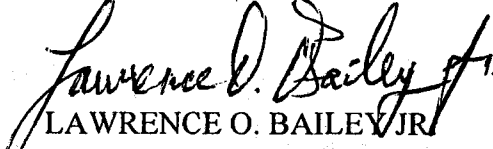
Dear Mr. Garcia

On 03 Jun 2000, Captain Brian Fitzgerald of our office reported an incident involving an AFFF release to Leon Creek to TNRCC Region 13 via the Chemtel off-duty hour service center (Report # 20001341). A teleconference was also conducted with Mr. Henry Karnei on the same day. Visual inspection of Leon Creek did not show any signs of loss of aquatic life. The following information is submitted to meet reporting requirements.

- (1). Date and time of incident: The release was reported to Kelly Air Force Base Command Post at 0530 hrs on 03 Jun 00.
- (2). Identity and quantity of released material: Approximately 14,800 gallons of effluent containing a trace of Aqueous Film Forming Foam.
- (3). Cause of incident: Failure of a lift station pump at the Environmental Process Control Facility (EPCF).
- (4). Extent of contamination: Approximately one hundred fifty feet downstream from Outfall 001 (within Kelly AFB property).
- (5). Contamination documentation: Samples were collected and submitted for Chemical Oxygen Demand and Dissolved Oxygen analytical results.
- (6). Site Map: A map of KAFB Outfall drainage area 001 is at attachment 1
- (7). Analytical results: Analytical results are at attachment 2.
- (8). Disposal: None required.

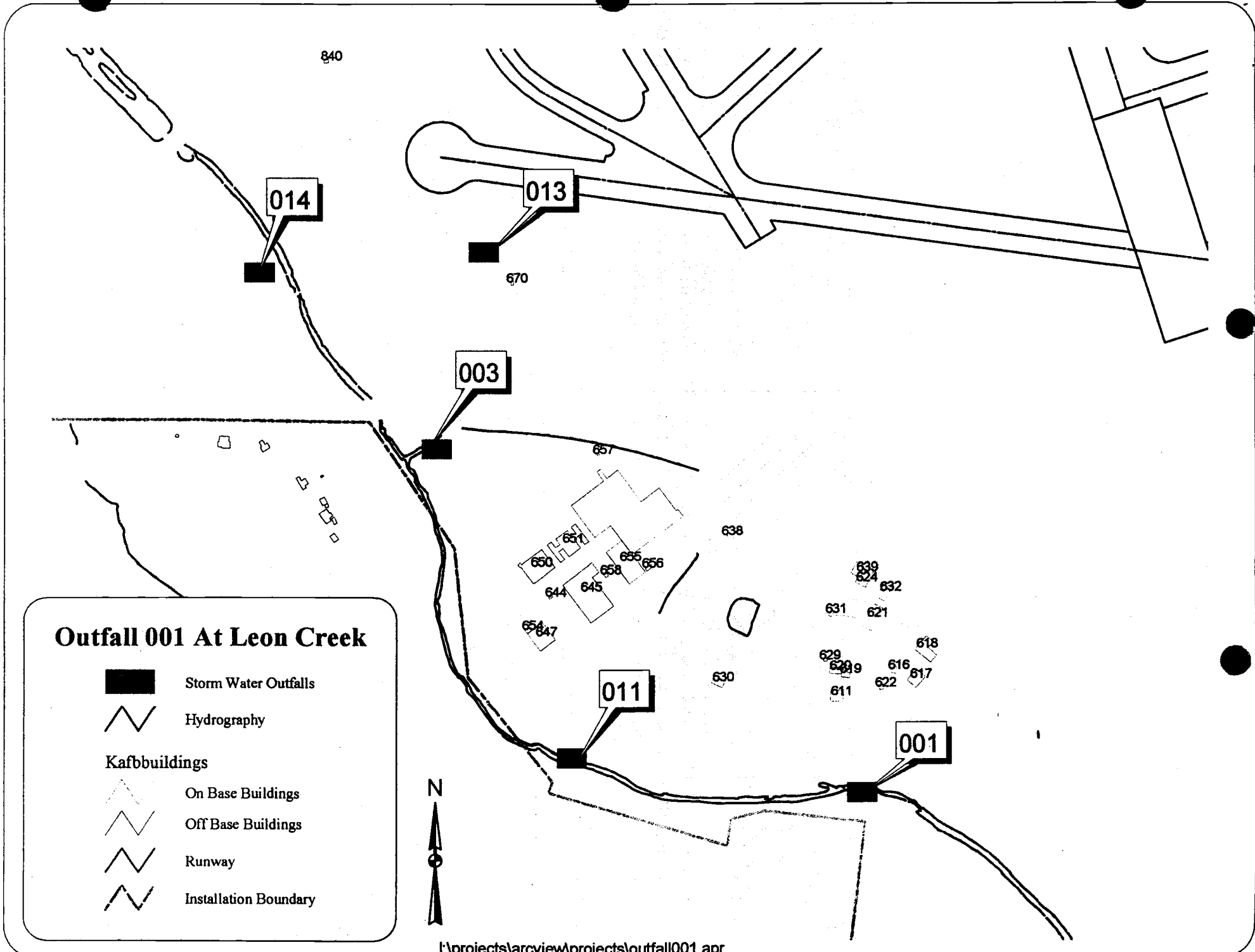
The concentrated AFFF has undergone treatment at the EPCF since 01 Jun 00, due to equipment failure at the 433<sup>rd</sup> AW. Pump failure at the EPCF lift station caused a backup and overflow of AFFF contaminated water at the effluent basin. AFFF contaminated water in the effluent basin rose above the weir in the basin and discharged a small amount to Leon Creek. The lift station pumps were switched to manual mode and a work request to repair the pumps has been initiated. Proper discharge quality has been attained, and normal discharge to Leon Creek was resumed on 06 Jun 00. Should you have further questions or require additional information, please contact Mr. Jerry Pantoja at (210) 925-3100 extension 310.

Sincerely,







  
LAWRENCE O. BAILEY JR.  
Director, Environmental Management

**Attachments**

1. Site Map
2. Analytical results



### Outfall 001 At Leon Creek

-  Storm Water Outfalls
-  Hydrography
- Kafbbuildings**
-  On Base Buildings
-  Off Base Buildings
-  Runway
-  Installation Boundary

DAY SHIFT  
POLYMER---019940

SATURDAY

6-3-00  
433<sup>RD</sup>---0083282294

0700-INFORMED BY NIGHT SHIFT WE WERE IN RECIRCULATION AND HAD A DISCHARGE TO CREEK FROM CITY LIFT STATION DUE TO PUMP NOT TURNING ON PUMPED STATION DOWN AND RESET PUMP. INFORMED TO COMMAND POST AND INFORM THEM OF DISCHARGE TO CREEK. C/AIRMAN SINGLETARY PATCH ME IN WITH FIRE DEPARTMENT AND TALK WITH MR. ESTRADA.

0720-MR. R. PEREZ AT PLANT. HE WAS INFORM OF PROBLEM BY NIGHT SHIFT.

0730-PICK UP SAMPLES FOR COD. FROM 001 AND LEON CREEK.

0800-PLANT IN RECYCLE MODE, WE HAVE BEEN TRYING TO CONTROL FOAM IN MAIN PLANT. J. PANTOJA ARRIVED AND INFORMED HIM THAT NO FOAM HAS LEFT THE BASE AND WE HAVE 2 BOOMS TO CONTAIN AT LEON CREEK. THE FLOW FROM 4400 BASIN IS GOING TO CITY LIFT STATION AND IS WORKING ON AUTO AGAIN.

0810-Informed Bill Mabson that a total of 14,873 gallons had gon out before the problem was discovered.

Cpt. Fitzgerald came by the plant to see what the problem was and get details. He did report the foam at Leon Creek to TNRCC.

0900-RAN A DO FOR FINAL WAS 1.5 MG/L AND CREEK WAS 7.49 MG/L. PLANT STILL IN RE-CIRCULATION.

1000-PLANT STILL IN RE-CIRCULATION. COD FOR THE CREEK WAS 32 MG/L AND THE FINAL COULD NOT READ IN THE LOW RANGE. *> 160 mg/L*

1100-PLANT STILL IN RE-CIRCULATION. STILL WAITING FOR DEFOAMER.

1200-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT.

1300-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT AND STILL NO DEFOAMER.

1400-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT AND STILL NO DEFOAMER. GOING TO RUN A COD FOR THE FINAL IN THE HI RANGE.

1500-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT AND STILL NO DEFOAMER.

1600-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT AND STILL NO DEFOAMER. COD IN THE FINAL IS 457 MG/L.

1700-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT AND STILL NO DEFOAMER. TURN OFF THE AIR TO FINAL.

1800-PLANT STILL IN RE-CIRCULATION. STILL TRYING TO CONTROL THE FOAM AROUND THE PLANT. THE MAN NEVER CAME WITH THE DEFOAMER MAYBE MONDAY.

DAY SHIFT ANDREW AND JOSE



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SAN ANTONIO AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

Mr. Lawrence O. Bailey, Jr.  
SA-ALC/EM  
307 Tinker Drive, Bldg 306  
Kelly AFB, TX 78241-5197

15 JUN 2000

Mr. Richard Garcia  
Texas Natural Resource Conservation Commission (TNRCC)  
Region 13  
140 Heimer Road, Suite 360  
San Antonio, TX 78232-5028

Re: Oil Sheen to Leon Creek

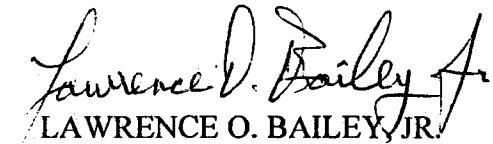
Dear Mr. Garcia

On 12 Jun 2000, Jerry Pantoja of our office reported an incident involving oil sheen release to Leon Creek to TNRCC Region 13 via the Chemtel off duty hour service center (Report # 20001429). A voice mail message was submitted to TNRCC Spill Program manager, Mr. Kelly Crunk on 13 Jun 2000. This report is being submitted to meet reporting requirements.

- (1). Date and time of incident: The release was reported to Kelly Air Force Base Command Post at 1730 hrs on 12 Jun 00.
- (2). Identity and quantity of released material: Petroleum sheen less than one gallon.
- (3). Cause of incident: Unknown.
- (4). Extent of contamination: Approximately 20 feet into tributary leading to Leon Creek from Outfall 003.
- (5). Contamination documentation: Water samples were collected and submitted for analytical results.
- (6). Site Map: A map of KAFB Outfall drainage area 003 is at attachment 1
- (7). Analytical results: Results will be submitted to your office.
- (8). Disposal: None required.

Environmental Process Control Facility (EPCF) personnel discovered an oil sheen in the basin at Outfall 003 and immediately diverted flow via the lift station back to the EPCF. KAFB spill response personnel deployed oil absorbing booms and pads in the basin and tributary leading to Leon Creek. Investigation of both Air Force and contracted work areas could not identify a discharge source. Additional investigation and interviews are being conducted. Should you have further questions or require additional information, please contact Mr. Jerry Pantoja at (210) 925-3100, extension 310.

Sincerely



LAWRENCE O. BAILEY, JR.

Director, Environmental Management

Attachments:

1. Site Map



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SAN ANTONIO AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

16 JUN 2000

Mr. Lawrence O. Bailey, Jr.  
SA-ALC/EM  
307 Tinker Drive, Bldg 306  
Kelly AFB, TX 78241-5197

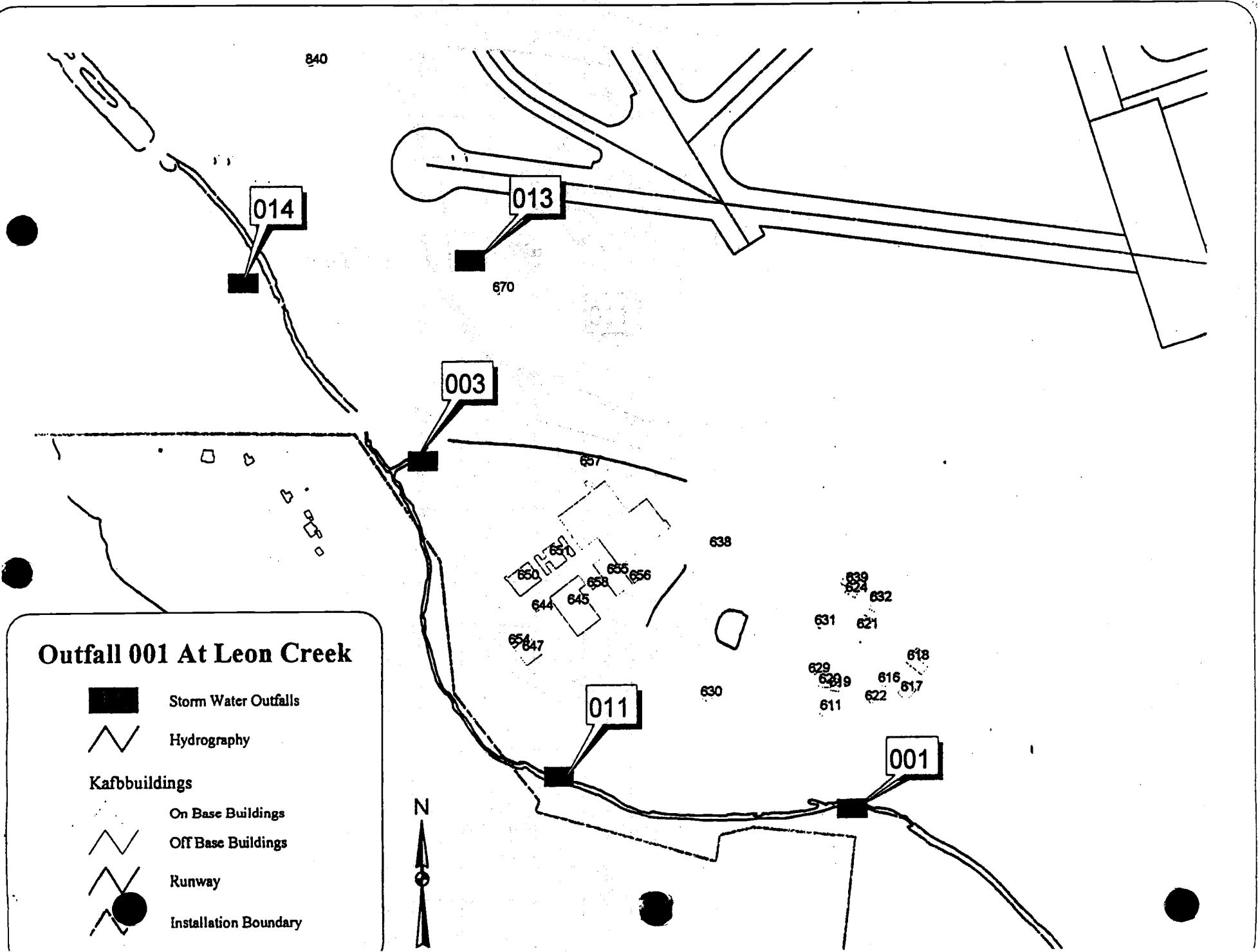
Mr. Richard Garcia  
Texas Natural Resource Conservation Commission (TNRCC)  
Region 13  
140 Heimer Road, Suite 360  
San Antonio, TX 78232-5028

Re: Groundwater Release to Leon Creek







Dear Mr. Garcia

On 14 Jun 2000, Jerry Pantoja of our office reported an incident involving a recovered groundwater release to Leon Creek to TNRCC Region 13 spill program manager, Mr. Kelly Crunk. The following information is submitted to meet reporting requirements:

- (1). Date and time of incident: The release was reported to Kelly Air Force Base Environmental Management Office at 1000 hrs on 14 Jun 00.
- (2). Identity and quantity of released material: Recovered groundwater containing a trace of Volatile Organic Compounds.
- (3). Cause of incident: Pipe rupture at monitoring well joint.
- (4). Extent of contamination: Minimal impact to soil and creek
- (5). Contamination documentation: Water samples were collected from the creek and submitted for analytical results.
- (6). Site Map: A map of KAFB Installation Restoration Program Site D-4 is at attachment 1
- (7). Analytical results: Analytical results of recovered groundwater are at attachment 2. Analytical results of samples of creek will be submitted to your office.
- (8). Disposal: None required.



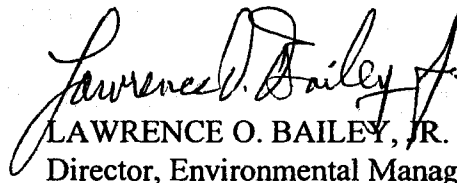
### Outfall 001 At Leon Creek

-  Storm Water Outfalls
-  Hydrography
- Kafbbuildings**
-  On Base Buildings
-  Off Base Buildings
-  Runway
-  Installation Boundary



A large accumulation of water was observed adjacent to monitoring well at IRP site D-4. The release saturated the immediate area. A small amount of runoff entered Leon Creek south of the 3<sup>rd</sup> tee box. The system was immediately shut off and a sand dike was constructed to prevent additional runoff into the creek. It is estimated that a 6-gallon per minute flow was released for approximately 10 to 14 hours. Cause of the pipe rupture is unknown. A vacuum truck was utilized to recover accumulated groundwater. Repair of the pipe system was initiated and pressure testing will be conducted upon final repair. There was no visible impact to Leon Creek or its aquatic life. Should you have further questions or require additional information, please contact Mr. Jerry Pantoja at (210) 925-3100 extension 310.

Sincerely



LAWRENCE O. BAILEY, JR.

Director, Environmental Management

Attachments:

1. Site Map
2. Analytical results

Sample#S0022602

LF014RW032  
LF014RW033

Sample#S0022603

LF014RW034  
VB115  
LF014RW035

Spill Site

LF014RW036  
LF014RW037  
VB117  
LF014RW038

LF014RW039

LF014RW040

Golf Cart  
Bridge/Dam

LF014RW041

VB118

Sample#S0022604

LF014RW042

VB114

MB102

Control  
Panel

LF014RW043

LF014RW045

LF014RW044

VB119

VB120

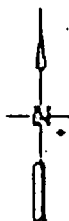
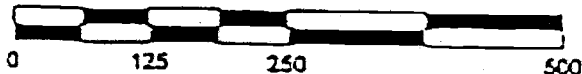
Sample#S0022605

VB121

VB122

To GW

GRAPHIC SCALE IN FEET



SPILL SITE AREA AND SAMPLE LOCATIONS

**D - 4 WATER SAMPLE RESULTS**

**Taken 24 May 00**

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Cyanide, Total	mg/L		U	0.01	1	N/A	DLN	06/02/00	11:30	9010B\9014
Sulfides	mg/L		U	1.0	1	N/A	JCR	05/30/00	13:10	376.1
Silver, Total	mg/L		U	0.01	1	N/A	KHR	05/31/00	14:33	6010B\3015
Arsenic, Total	mg/L		U	0.004	1	N/A	KHR	05/31/00	14:33	6010B\3015
Barium, Total	mg/L	0.079		0.005	1	N/A	KHR	05/31/00	14:33	6010B\3015
Beryllium, Total	mg/L		U	0.0005	1	N/A	KHR	05/31/00	14:33	6010B\3015
Cadmium, Total	mg/L		U	0.005	1	N/A	KHR	05/31/00	14:33	6010B\3015
Cobalt, Total	mg/L		U	0.01	1	N/A	KHR	05/31/00	14:33	6010B\3015
Chromium, Total	mg/L	0.0017	J	0.005	1	N/A	KHR	05/31/00	14:33	6010B\3015
Copper, Total	mg/L	0.0053		0.005	1	N/A	KHR	05/31/00	14:33	6010B\3015
Mercury, Total	mg/L		U	0.0002	1	N/A	DMD	06/01/00	09:18	7470A\7470A
Nickel, Total	mg/L		U	0.02	1	N/A	KHR	05/31/00	14:33	6010B\3015
Lead, Total	mg/L		U	0.005	1	N/A	KHR	05/31/00	14:33	6010B\3015
Antimony, Total	mg/L		U	0.006	1	N/A	CRC	06/07/00	20:27	7041\3015
Selenium, Total	mg/L		U	0.004	1	N/A	CRC	06/06/00	22:08	7740\7740
Tin, Total	mg/L		U	0.40	1	R-2	KHR	06/01/00	11:31	6010B\3015
Thallium, Total	mg/L		U	0.002	1	N/A	CRC	06/05/00	15:44	3020A
Vanadium, Total	mg/L		U	0.01	1	N/A	KHR	05/31/00	14:33	6010B\3015
Zinc, Total	mg/L	0.022		0.01	1	N/A	KHR	05/31/00	14:33	6010B\3015

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00

Sample Weight: N/A  
 Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A  
 Extract Date: 05/26/00  
 Analysis Date: 05/30/00 Time: 23:33

Instrument: HP9  
 Analyst: ECL  
 Lab File ID: 9G10538

Method: 8081A\3510C  
 Run ID: R91022  
 Batch: WG77801

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		U	0.05	1
319-85-7	beta-BHC	ug/L		U	0.05	1
319-86-8	delta-BHC	ug/L		U	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		U	0.05	1
76-44-8	Heptachlor	ug/L		U	0.05	1

RL = Reporting Limit

Logi 0005576  
June 14, 2000 09:01 am

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L0005576-08  
Client Sample ID: S00176-08  
Site/Work ID: O&M ANNUAL SITE D-4  
Matrix: Water

Dil. Type: N/A  
COC Info: S00-176/

Sample Weight: N/A  
Extract Volume: N/A

Date Collected: 05/24/00

% Solid: N/A

TCLP Extract Date: N/A  
Extract Date: 05/26/00  
Analysis Date: 05/30/00 Time: 23:33

Instrument: HP9  
Analyst: ECL  
Lab File ID: 9G10538

Method: 8081A\3510C  
Run ID: R91022  
Batch: WG77801

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
309-00-2	Aldrin.....	ug/L		U	0.05	1
1024-57-3	Heptachlor epoxide.....	ug/L		U	0.05	1
959-98-8	Endosulfan I.....	ug/L		U	0.05	1
60-57-1	Dieldrin.....	ug/L		U	0.10	1
72-55-9	4,4'-DDE.....	ug/L		U	0.10	1
72-20-8	Endrin.....	ug/L		U	0.10	1
33213-65-9	Endosulfan II.....	ug/L		U	0.10	1
72-54-8	4,4'-DDD.....	ug/L		U	0.10	1
1031-07-8	Endosulfan sulfate.....	ug/L		U	0.10	1
50-29-3	4,4'-DDT.....	ug/L		U	0.10	1
72-43-5	Methoxychlor.....	ug/L		U	0.50	1
53494-70-5	Endrin ketone.....	ug/L		U	0.10	1
7421-93-4	Endrin aldehyde.....	ug/L		U	0.10	1
5103-71-9	alpha Chlordane.....	ug/L		U	0.05	1
5103-74-2	gamma Chlordane.....	ug/L		U	0.05	1
8001-35-2	Toxaphene.....	ug/L		U	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....  
Decachlorobiphenyl.....

54.1 ( 45 - 125% )  
84.9 ( 34 - 133% )

RL - Reporting Limit

Product: 8082 - PCB

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00  
 Instrument: HP7  
 Analyst: SMW  
 Lab File ID: 7G7437

Sample Weight: N/A  
 Extract Volume: N/A  
 % Solid: N/A  
 Method: 8082\3510C  
 Run ID: R91195  
 Batch: WG77800

TCLP Extract Date: N/A  
 Extract Date: 05/26/00  
 Analysis Date: 05/30/00 Time: 23:29

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		U	0.50	1
11104-28-2	Aroclor-1221	ug/L		U	0.50	1
11141-16-5	Aroclor-1232	ug/L		U	0.50	1
53469-21-9	Aroclor-1242	ug/L		U	0.50	1
12672-29-6	Aroclor-1248	ug/L		U	0.50	1
11097-69-1	Aroclor-1254	ug/L		U	0.50	1
11096-82-5	Aroclor-1260	ug/L		U	0.50	1
SURROGATES- In Percent Recovery:						
	2,4,5,6-Tetrachloro-m-xylene	54.5		( 45 - 125%)		
	Decachlorobiphenyl	100		( 34 - 133%)		

Product: 827-A9 - Appendix IX Semivolatiles

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00  
 Instrument: HPMS3  
 Analyst: CLK  
 Lab File ID: 3M20118

Sample Weight: N/A  
 Extract Volume: N/A  
 % Solid: N/A  
 Method: 8270C\3510C  
 Run ID: R91181  
 Batch: WG77920

TCLP Extract Date: N/A  
 Extract Date: 05/26/00  
 Analysis Date: 06/01/00 Time: 21:17

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
83-32-9	Acenaphthene	ug/L		U	5.0	1
208-96-8	Acenaphthylene	ug/L		U	5.0	1
98-86-2	Acetophenone	ug/L		U	5.0	1
53-96-3	2-Acetylaminofluorene	ug/L		U	10	1
92-67-1	4-Aminobiphenyl	ug/L		U	50	1
62-53-3	Aniline	ug/L		U	5.0	1
120-12-7	Anthracene	ug/L		U	5.0	1

RL = Reporting Limit

Product: 827-A9 - Appendix IX Semivolatiles

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/

Sample Weight: N/A  
 Extract Volume: N/A

Date Collected: 05/24/00

\* Solid: N/A

TCLP Extract Date: N/A  
 Extract Date: 05/26/00  
 Analysis Date: 06/01/00 Time: 21:17

Instrument: HFMS3  
 Analyst: CLK  
 Lab File ID: 3M20118

Method: 8270C\3510C  
 Run ID: R91181  
 Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
140-51-8	Aramite.....	ug/L		U	25	1
56-55-3	Benzo(a)anthracene.....	ug/L		U	5.0	1
205-99-2	Benzo(b)fluoranthene.....	ug/L		U	5.0	1
207-08-9	Benzo(k)fluoranthene.....	ug/L		U	5.0	1
191-24-2	Benzo(g,h,i)Perylene.....	ug/L		U	5.0	1
50-32-8	Benzo(a)pyrene.....	ug/L		U	5.0	1
100-51-6	Benzyl alcohol.....	ug/L		U	5.0	1
111-91-1	Bis(2-Chloroethoxy)Methane.....	ug/L		U	5.0	1
111-44-4	Bis(2-Chloroethyl)ether.....	ug/L		U	5.0	1
108-60-1	bis(2-Chloroisopropyl)ether.....	ug/L		U	5.0	1
117-81-7	bis(2-Ethylhexyl)phthalate.....	ug/L	51		5.0	1
101-55-3	4-Bromophenyl phenyl ether.....	ug/L		U	5.0	1
85-68-7	Butyl benzyl phthalate.....	ug/L		U	5.0	1
86-74-8	Carbazole.....	ug/L		U	10	1
106-47-8	p-Chloroaniline.....	ug/L		U	5.0	1
510-15-6	Chlorobenzilate.....	ug/L		U	10	1
59-50-7	p-Chloro-m-cresol.....	ug/L		U	5.0	1
91-58-7	2-Chloronaphthalene.....	ug/L		U	5.0	1
95-57-8	2-Chlorophenol.....	ug/L		U	5.0	1
7005-72-3	4-Chlorophenyl phenyl ether.....	ug/L		U	5.0	1
218-01-9	Chrysene.....	ug/L		U	5.0	1
108-39-4	m-Cresol.....	ug/L		U	5.0	1
95-48-7	o-Cresol.....	ug/L		U	5.0	1
106-44-5	p-Cresol.....	ug/L		U	5.0	1
2303-16-4	Diallate.....	ug/L		U	25	1
53-70-3	Dibenzo(a,h)anthracene.....	ug/L		U	5.0	1
132-64-9	Dibenzofuran.....	ug/L		U	5.0	1
84-74-2	Di-N-Butylphthalate.....	ug/L		U	5.0	1
95-50-1	o-Dichlorobenzene.....	ug/L		U	5.0	1
541-73-1	m-Dichlorobenzene.....	ug/L		U	5.0	1
106-46-7	p-Dichlorobenzene.....	ug/L		U	5.0	1
91-94-1	3,3'-Dichlorobenzidine.....	ug/L		U	10	1
120-83-2	2,4-Dichlorophenol.....	ug/L		U	5.0	1
87-65-0	2,6-Dichlorophenol.....	ug/L		U	5.0	1
84-66-2	Diethyl phthalate.....	ug/L		U	5.0	1
297-97-2	Thionazin.....	ug/L		U	5.0	1
60-51-5	Dimethoate.....	ug/L		U	10	1
60-11-7	p-Dimethylaminoazobenzene.....	ug/L		U	25	1
57-97-6	7,12-Dimethylbenz(a)anthracene.....	ug/L		U	25	1

RL = Reporting Limit

Product: 827-A9 - Appendix IX Semivolatiles

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00

Sample Weight: N/A  
 Extract Volume: N/A  
 % Solid: N/A

TCLP Extract Date: N/A  
 Extract Date: 05/26/00  
 Analysis Date: 06/01/00 Time: 21:17

Instrument: HPMS3  
 Analyst: CLK  
 Lab File ID: 3M20118

Method: 8270C\3510C  
 Run ID: R91181  
 Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
119-93-7	3,3-Dimethylbenzidine.....	ug/L		U	200	1
122-09-8	Phenyl-tert-butylamine.....	ug/L		U	5.0	1
105-67-9	2,4-Dimethylphenol.....	ug/L		U	5.0	1
131-11-3	Dimethyl phthalate.....	ug/L		U	5.0	1
99-65-0	m-Dinitrobenzene.....	ug/L		U	5.0	1
534-52-1	4,6-Dinitro-o-cresol.....	ug/L		U	25	1
51-28-5	2,4-Dinitrophenol.....	ug/L		U	25	1
121-14-2	2,4-Dinitrotoluene.....	ug/L		U	5.0	1
606-20-2	2,6-Dinitrotoluene.....	ug/L		U	5.0	1
117-84-0	Di-n-octyl phthalate.....	ug/L		U	5.0	1
122-39-4	Diphenylamine.....	ug/L		U	5.0	1
298-04-4	Disulfoton.....	ug/L		U	10	1
62-50-0	Ethyl methanesulfonate.....	ug/L		U	10	1
52-85-7	Famphur.....	ug/L		U	250	1
206-44-0	Fluoranthene.....	ug/L		U	5.0	1
86-73-7	Fluorene.....	ug/L		U	5.0	1
118-74-1	Hexachlorobenzene.....	ug/L		U	5.0	1
87-68-3	Hexachlorobutadiene.....	ug/L		U	5.0	1
77-47-4	Hexachlorocyclopentadiene.....	ug/L		U	5.0	1
67-72-1	Hexachloroethane.....	ug/L		U	5.0	1
70-30-4	Hexachlorophene.....	ug/L		U	5.0	1
1888-71-7	Hexachloropropene.....	ug/L		U	5.0	1
193-39-5	Indeno(1,2,3-cd)pyrene.....	ug/L		U	5.0	1
465-73-6	Isodrin.....	ug/L		U	25	1
78-59-1	Isophorone.....	ug/L		U	5.0	1
120-58-1	Isosafrole.....	ug/L		U	5.0	1
143-50-0	Kepone.....	ug/L		U	250	1
91-80-5	Methapyrilene.....	ug/L		U	25	1
56-49-5	3-Methylcholanthrene.....	ug/L		U	5.0	1
66-27-3	Methyl methanesulfonate.....	ug/L		U	5.0	1
91-57-6	2-Methylnaphthalene.....	ug/L		U	5.0	1
91-20-3	Naphthalene.....	ug/L		U	5.0	1
130-15-4	1,4-Naphthoquinone.....	ug/L		U	5.0	1
134-32-7	1-Naphthylamine.....	ug/L		U	50	1
91-59-8	2-Naphthylamine.....	ug/L		U	50	1
99-09-2	m-Nitroaniline.....	ug/L		U	25	1
88-74-4	o-Nitroaniline.....	ug/L		U	25	1
100-01-6	p-Nitroaniline.....	ug/L		U	25	1
98-95-3	Nitrobenzene.....	ug/L		U	5.0	1

RL - Reporting Limit



Log# L0005576  
 June 14, 2000 09:01 am

KEMRON ENVIRONMENTAL SERVICES

Product: 827-A9 - Appendix IX Semivolatiles

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: D&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00

Sample Weight: N/A  
 Extract Volume: N/A

\* Solid: N/A

TCLP Extract Date: N/A  
 Extract Date: 05/26/00  
 Analysis Date: 06/01/00 Time: 21:17

Instrument: HPMS3  
 Analyst: CLK  
 Lab File ID: 3M20118

Method: 8270C\3510C  
 Run ID: R91181  
 Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
88-75-5	2-Nitrophenol	ug/L		U	5.0	1
100-02-7	4-Nitrophenol	ug/L		U	25.0	1
924-16-3	N-Nitrosodi-N-Butylamine	ug/L		U	5.0	1
55-18-5	N-Nitrosodiethylamine	ug/L		U	5.0	1
56-57-5	4-Nitroquinoline 1-Oxide	ug/L		U	25.0	1
62-75-9	N-Nitrosodimethylamine	ug/L		U	5.0	1
86-30-6	N-Nitrosodiphenylamine	ug/L		U	5.0	1
621-64-7	N-Nitrosodipropylamine	ug/L		U	5.0	1
10595-95-6	N-Nitrosomethylethylamine	ug/L		U	5.0	1
59-89-2	N-Nitrosomorpholine	ug/L		U	5.0	1
100-75-4	N-Nitrosopiperidine	ug/L		U	10	1
930-55-2	N-Nitrosopyrrolidine	ug/L		U	10	1
99-55-8	5-Nitro-o-toluidine	ug/L		U	5.0	1
56-38-2	Parathion	ug/L		U	5.0	1
608-93-5	Pentachlorobenzene	ug/L		U	5.0	1
76-01-7	Pentachloroethane	ug/L		U	5.0	1
82-68-8	Pentachloronitrobenzene	ug/L		U	10	1
87-86-5	Pentachlorophenol	ug/L		U	10	1
62-44-2	Phenacetin	ug/L		U	10	1
85-01-8	Phenanthrene	ug/L		U	5.0	1
108-95-2	Phenol	ug/L		U	5.0	1
106-50-3	p-Phenylenediamine	ug/L		U	5.0	1
298-02-2	Phorate	ug/L		U	10	1
109-06-8	2-Picoline	ug/L		U	5.0	1
23950-58-5	Pronamide	ug/L		U	5.0	1
129-00-0	Pyrene	ug/L		U	5.0	1
110-86-1	Pyridine	ug/L		U	5.0	1
94-59-7	Safrole	ug/L		U	5.0	1
95-94-3	1,2,4,5-Tetrachlorobenzene	ug/L		U	5.0	1
58-90-2	2,3,4,6-Tetrachlorophenol	ug/L		U	5.0	1
3689-24-5	Sulfotepp	ug/L		U	10	1
95-53-4	o-Toluidine	ug/L		U	10	1
120-82-1	1,2,4-Trichlorobenzene	ug/L		U	5.0	1
95-95-4	2,4,5-Trichlorophenol	ug/L		U	5.0	1
88-06-2	2,4,6-Trichlorophenol	ug/L		U	5.0	1
126-68-1	0,0,0-Triethylphosphorothioate	ug/L		U	5.0	1
99-35-4	sym-Trinitrobenzene	ug/L		U	10	1

RL = Reporting Limit

Log# 0005576  
June 14, 2000 09:01 am

KEMRON ENVIRONMENTAL SERVICES

Product: 827-A9 - Appendix IX Semivolatiles

Lab Sample ID: L0005576-08  
Client Sample ID: S00176-08  
Site/Work ID: O&M ANNUAL SITE D-4  
Matrix: Water  
TCLP Extract Date: N/A  
Extract Date: 05/26/00  
Analysis Date: 06/01/00 Time: 21:17

Dil. Type: N/A  
COC Info: S00-176/  
Date Collected: 05/24/00  
Instrument: HPMS3  
Analyst: CLK  
Lab File ID: 3M20118

Sample Weight: N/A  
Extract Volume: N/A  
% Solid: N/A  
Method: 8270C\3510C  
Run ID: R91181  
Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
SURROGATES- In Percent Recovery:						
	2-Fluorophenol.....	41.2		( 25 - 125%)		
	Phenol-d5.....	26.8		( 25 - 125%)		
	Nitrobenzene-d5.....	72.1		( 32 - 125%)		
	2-Fluorobiphenyl.....	65.1		( 43 - 125%)		
	2,4,6-Tribromophenol.....	92.2		( 25 - 134%)		
	p-Terphenyl-d14.....	87.0		( 42 - 126%)		

Product: 827-LS - Library Search - BNA

Lab Sample ID: L0005576-08  
Client Sample ID: S00176-08  
Site/Work ID: O&M ANNUAL SITE D-4  
Matrix: Water  
TCLP Extract Date: N/A  
Extract Date: 05/26/00  
Analysis Date: 06/01/00 Time: 21:17

Dil. Type: N/A  
COC Info: S00-176/  
Date Collected: 05/24/00  
Instrument: HPMS3  
Analyst: CLK  
Lab File ID: 3M20118

Sample Weight: N/A  
Extract Volume: N/A  
% Solid: N/A  
Method: 8270C\3510C  
Run ID: R91181  
Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Ret Time
R01R1	unknown75.....	ug/L	389			6.11
R01R1	unknown76.....	ug/L	7.83			9.89
R01R1	unknown77.....	ug/L	4.53			12.87
R01R1	unknown78.....	ug/L	4.45			16.19
R01R1	unknown79.....	ug/L	7.20			17.58

RL = Reporting Limit

Product: 827-A9 - Appendix IX Semivolatiles

Lab Sample ID: L0005576-08  
Client Sample ID: S00176-08  
Site/Work ID: O&M ANNUAL SITE D-4  
Matrix: Water  
TCLP Extract Date: N/A  
Extract Date: 05/26/00  
Analysis Date: 06/01/00 Time: 21:17

Dil. Type: N/A  
COC Info: S00-176/  
Date Collected: 05/24/00  
Instrument: HPMS3  
Analyst: CLK  
Lab File ID: 3M20118

Sample Weight: N/A  
Extract Volume: N/A  
% Solid: N/A  
Method: 8270C\3510C  
Run ID: R91181  
Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
SURROGATES- In Percent Recovery:						
	2-Fluorophenol.....	41.2		( 25 - 125%)		
	Phenol-d5.....	26.8		( 25 - 125%)		
	Nitrobenzene-d5.....	72.1		( 32 - 125%)		
	2-Fluorobiphenyl.....	65.1		( 43 - 125%)		
	2,4,6-Tribromophenol.....	92.2		( 25 - 134%)		
	p-Terphenyl-d14.....	87.0		( 42 - 126%)		

Product: 827-LS - Library Search - BNA

Lab Sample ID: L0005576-08  
Client Sample ID: S00176-08  
Site/Work ID: O&M ANNUAL SITE D-4  
Matrix: Water  
TCLP Extract Date: N/A  
Extract Date: 05/26/00  
Analysis Date: 06/01/00 Time: 21:17

Dil. Type: N/A  
COC Info: S00-176/  
Date Collected: 05/24/00  
Instrument: HPMS3  
Analyst: CLK  
Lab File ID: 3M20118

Sample Weight: N/A  
Extract Volume: N/A  
% Solid: N/A  
Method: 8270C\3510C  
Run ID: R91181  
Batch: WG77920

CAS #	Compound	Units	Result	Qualifiers	RL	Ret Time
R01R1	unknown75.....	ug/L	389			6.11
R01R1	unknown76.....	ug/L	7.83			9.89
R01R1	unknown77.....	ug/L	4.53			12.87
R01R1	unknown78.....	ug/L	4.45			16.19
R01R1	unknown79.....	ug/L	7.20			17.58

RL = Reporting Limit

Product: 824-A9 - Appendix IX Volatiles

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00  
 Instrument: HPMS9  
 Analyst: MES  
 Lab File ID: 9M9744

Sample Weight: N/A  
 Extract Volume: N/A  
 % Solid: N/A  
 Method: 8260B  
 Run ID: R91874  
 Batch: WG78272

TCLP Extract Date: N/A  
 Extract Date: N/A  
 Analysis Date: 06/06/00 Time: 18:42

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
67-64-1	Acetone	ug/L		U	5.0	1
75-05-8	Acetonitrile	ug/L		U	100	1
107-02-8	Acrolein	ug/L		U	100	1
107-13-1	Acrylonitrile	ug/L		U	100	1
107-05-1	Allyl chloride	ug/L		U	100	1
71-43-2	Benzene	ug/L		U	1.0	1
75-27-4	Bromodichloromethane	ug/L		U	1.0	1
75-25-2	Bromoform	ug/L		U	1.0	1
75-15-0	Carbon disulfide	ug/L		U	1.0	1
56-23-5	Carbon tetrachloride	ug/L		U	1.0	1
108-90-7	Chlorobenzene	ug/L	3.67		1.0	1
75-00-3	Chloroethane	ug/L		U	1.0	1
110-75-8	2-Chloroethyl vinyl ether	ug/L		U	10	1
67-66-3	Chloroform	ug/L		U	1.0	1
126-99-8	Chloroprene	ug/L		U	5.0	1
124-48-1	Dibromochloromethane	ug/L		U	1.0	1
96-12-8	1,2-Dibromo-3-chloropropane	ug/L		U	5.0	1
106-93-4	1,2-Dibromoethane	ug/L		U	5.0	1
110-57-6	Trans-1,4-Dichloro-2-Butene	ug/L		U	5.0	1
75-71-8	Dichlorodifluoromethane	ug/L		U	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		U	1.0	1
156-59-2	cis-1,2-Dichloroethene	ug/L	123		1.0	1
107-06-2	1,2-Dichloroethane	ug/L		U	1.0	1
75-35-4	1,1-Dichloroethene	ug/L	0.270	J	1.0	1
156-60-5	trans-1,2-Dichloroethene	ug/L	2.24		1.0	1
78-87-5	1,2-Dichloropropane	ug/L		U	1.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		U	1.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		U	1.0	1
123-91-1	1,4-Dioxane	ug/L		U	100	1
100-41-4	Ethyl benzene	ug/L		U	1.0	1
97-63-2	Ethyl Methacrylate	ug/L		U	5.0	1
591-78-6	2-Hexanone	ug/L		U	5.0	1
78-83-1	Isobutanol	ug/L		U	100	1
126-98-7	Methacrylonitrile	ug/L		U	5.0	1
74-83-9	Methyl bromide	ug/L		U	1.0	1
74-87-3	Methyl chloride	ug/L		U	1.0	1
78-93-3	2-Butanone	ug/L		U	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		U	5.0	1
74-95-3	Methylene bromide	ug/L		U	5.0	1

RL = Reporting Limit

Product: 824-A9 - Appendix IX Volatiles

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00

Sample Weight: N/A  
 Extract Volume: N/A  
 % Solid: N/A

TCLP Extract Date: N/A  
 Extract Date: N/A  
 Analysis Date: 06/06/00 Time: 18:42

Instrument: HPMS9  
 Analyst: MES  
 Lab File ID: 9M9744

Method: 8260B  
 Run ID: R91874  
 Batch: WG78272

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
75-09-2	Methylene chloride.....	ug/L		U	2.0	1
74-88-4	Methyl Iodide.....	ug/L		U	5.0	1
80-62-6	Methyl methacrylate.....	ug/L		U	5.0	1
107-12-0	Propionitrile.....	ug/L		U	5.0	1
100-42-5	Styrene.....	ug/L		U	1.0	1
630-20-6	1,1,1,2-Tetrachloroethane.....	ug/L		U	10	1
79-34-5	1,1,2,2-Tetrachloroethane.....	ug/L		U	1.0	1
127-18-4	Tetrachloroethene.....	ug/L	0.980	J	1.0	1
108-88-3	Toluene.....	ug/L		U	1.0	1
71-55-6	1,1,1-Trichloroethane.....	ug/L		U	1.0	1
79-00-5	1,1,2-Trichloroethane.....	ug/L		U	1.0	1
79-01-6	Trichloroethene.....	ug/L	60.2		1.0	1
75-69-4	Trichlorofluoromethane.....	ug/L		U	10	1
96-18-4	1,2,3-Trichloropropane.....	ug/L		U	5.0	1
108-05-4	Vinyl acetate.....	ug/L		U	5.0	1
75-01-4	Vinyl chloride.....	ug/L	6.64		1.0	1
1330-20-7	Xylenes, Total.....	ug/L		U	1.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane.....	92.3	( 75 - 125%)
1,2-Dichloroethane-d4.....	103	( 62 - 139%)
Toluene-d8.....	106	( 75 - 125%)
p-Bromofluorobenzene.....	103	( 75 - 125%)

Login #L0005576  
 June 14, 2000 09:01 am

**KEMRON ENVIRONMENTAL SERVICES**

Product: 826-LS - Library Search - VOA

Lab Sample ID: L0005576-08  
 Client Sample ID: S00176-08  
 Site/Work ID: O&M ANNUAL SITE D-4  
 Matrix: Water

Dil. Type: N/A  
 COC Info: S00-176/  
 Date Collected: 05/24/00

Sample Weight: N/A  
 Extract Volume: N/A  
 % Solid: N/A

TCLP Extract Date: N/A  
 Extract Date: N/A  
 Analysis Date: 06/06/00 Time: 18:42

Instrument: HPMS9  
 Analyst: MES  
 Lab File ID: 9M9744

Method: 8260B  
 Run ID: R91874  
 Batch : WG78272

CAS #	Compound	Units	Result	Qualifiers	RL	Ret Time
No Searchable Peaks.....		ug/L				

RL = Reporting Limit

# **Quintana Road Project**

Addition of King Street Phases I & II

July 2000

Public Works Department

Capital Programs

# Purpose

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- To provide an overview of the City of San Antonio's plan to add King Street Phase I and II to the Quintana Road Project.
- Answer your questions concerning this project.



# Background

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- Original Quintana Road Project halted due to ground water contamination June 1988.
- Years of negotiation between Kelly AFB, TNRCC, and the City of San Antonio created the Quintana Road Drainage No.64 Extension Project.
- Awarded construction contract to Laughlin Environmental for \$12,861,938 on June 10, 1999.
- Construction: Ahead of Schedule ( $\approx 50\%$  complete).

# King Street Addition

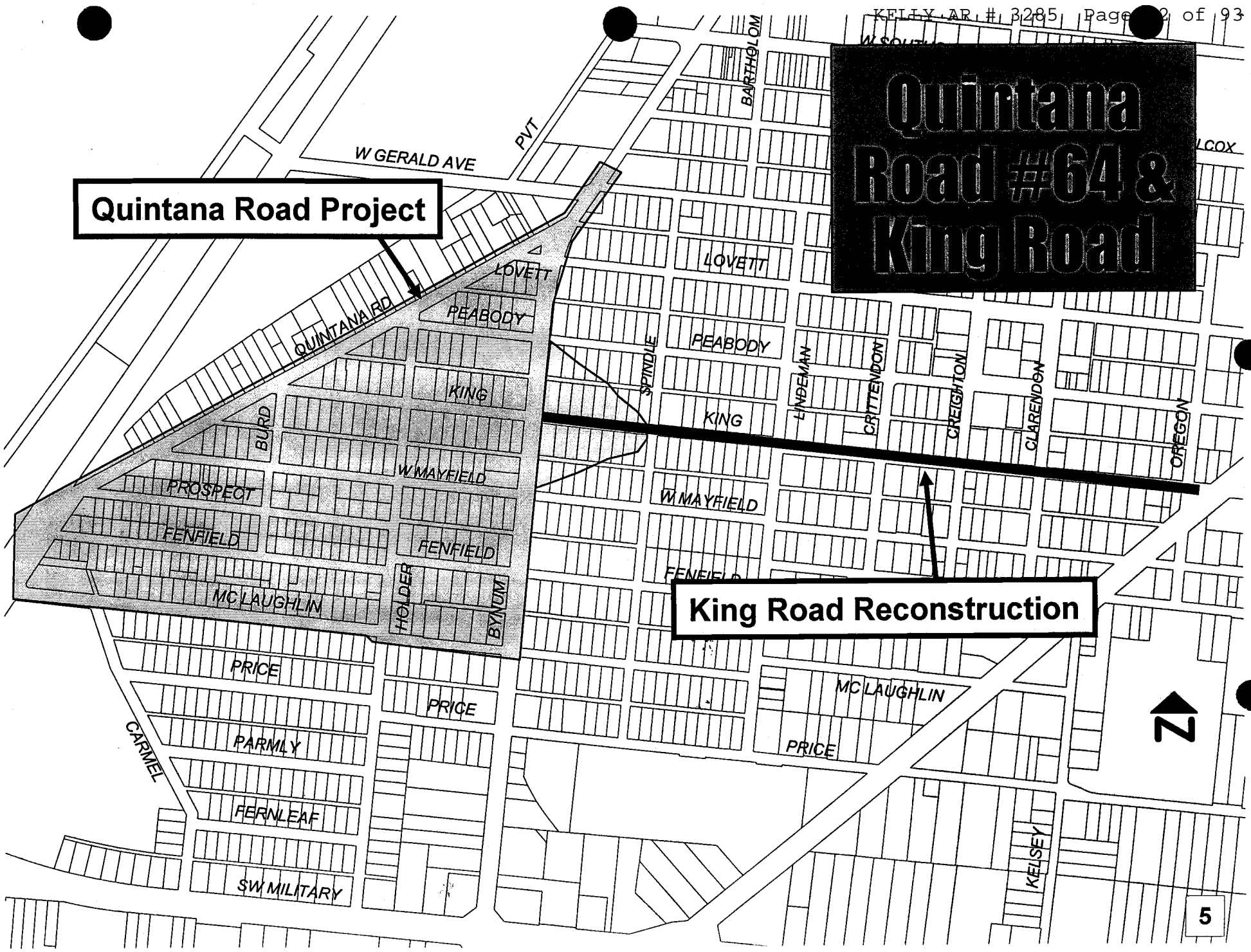
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- Field Alteration.
- Project Scope.
  - ◆ King Street from Bynum to New Laredo Hwy
  - ◆ Includes:
    - Underground Drainage (72" - 24" Pipe)
    - Street Reconstruction
    - Some Sanitary Sewer Replacement

**Quintana Road Project**

**Quintana Road #64 & King Road**

**King Road Reconstruction**



# Benefits

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- Adding the King Street project to the Quintana Road project:
  - ◆ Expedites completion of King Street and expenditure of CDBG funds.
  - ◆ Mitigates more of the plume along King Street.
  - ◆ Avoids renegotiating the Memo of Agreement for environmental remediation with Kelly AFB.
  - ◆ Reduces mobilization costs by using the current contractor on site.
  - ◆ Delivers completed project for the entire area while also addressing contamination issue.

# Further Benefits

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- Maximizes the current City and Kelly AFB program to clean up contaminated soil within the groundwater bearing strata in the Quintana Road and King Street areas.
- Utilizes current Federal and Local funds from under-runs on the Quintana project for environmental work on King Street.

# King Street Construction Funding

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- Laughlin Environmental, Inc. (current contractor) submitted construction cost proposal of \$1,515,676.66 to complete King Street Phase I & II.
- State law allows field alterations up to 25% of the contract amount, which is \$3.2 Million.
- Construction funds are available.

# Schedule

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- City Council approved May 18, 2000
- Environmental preliminary investigations and reporting Jun 2000-Aug 2000
- Construction and environmental monitoring Aug 2000-May 2001

# **COSA Point of Contact**

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- **Project Manager:**  
Susan Valis Crane, ASLA  
(210) 207-2815



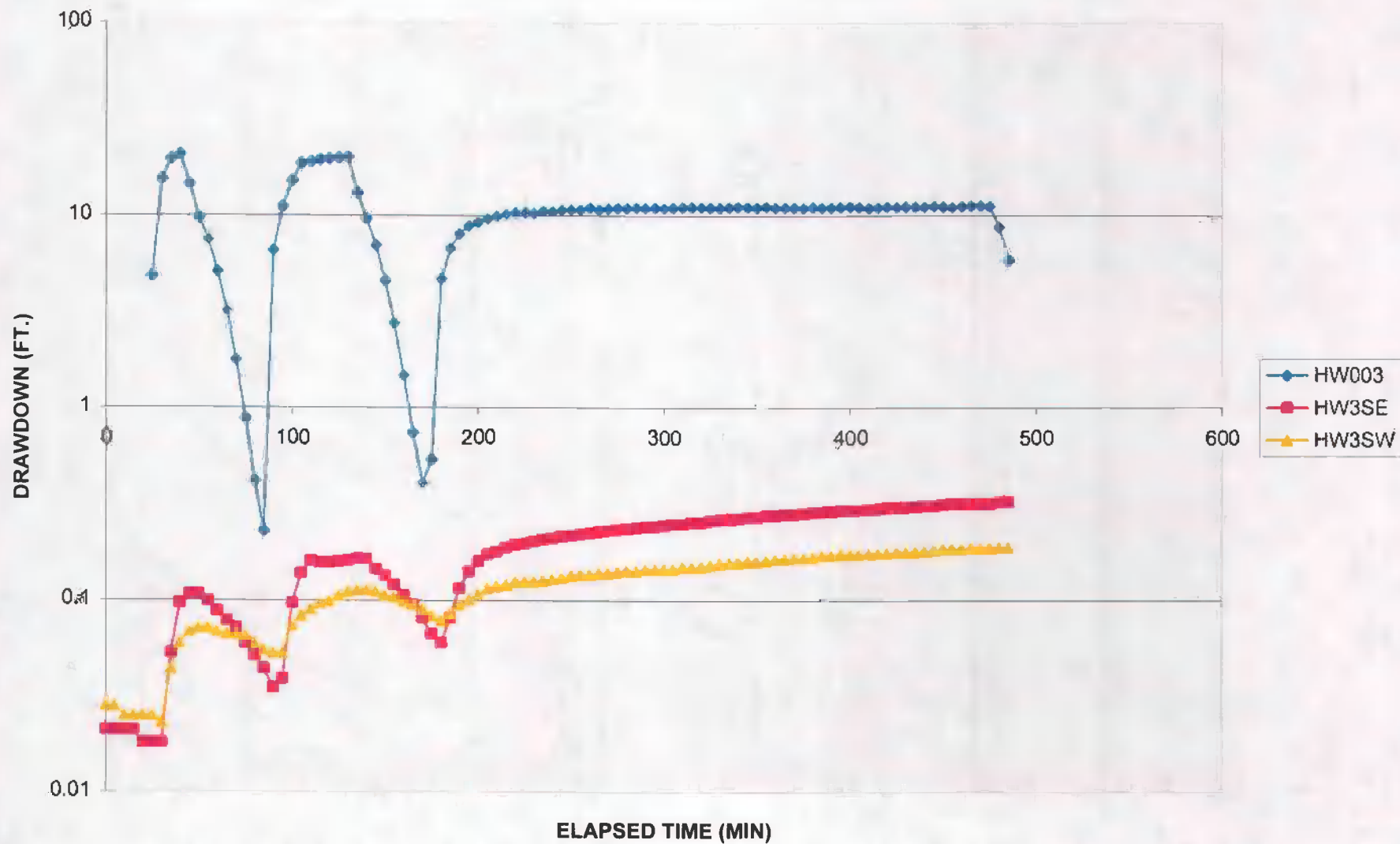
**?**

**Any Questions**

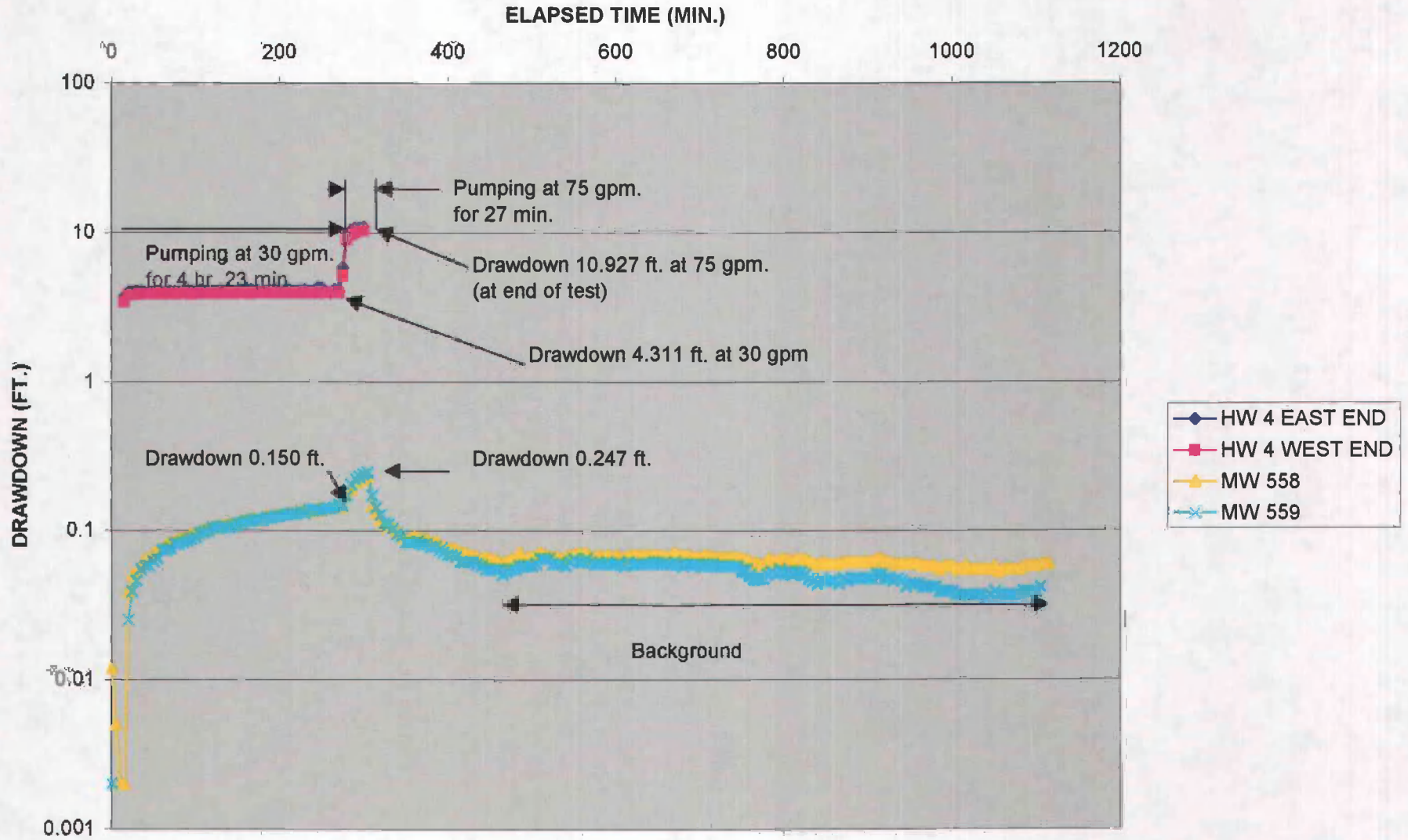
EAST KELLY AFB										
WELL TESTING RESULTS (FINAL)										
WELL	DATUM ELEVATION (FT. NGD)	DEPTH BELOW DATUM TO STATIC WATER LEVEL (FT.)*	APPROX. STATIC WATER LEVEL (FT. NGD)	PUMPED RATE (GPM)	DURATION (HR:MIN)	DRAW DOWN (FT)	FINAL ELEVATION (FT. NGD)	COMMENTS	PROPOSED PUMPING RATE (GPM)	
VW-1	663	** *	15.95	647.05	35	6:04	1.184	645.866	Continued to gradually drawdown at end of test.	35
VW-2	663	** *	18.67	644.33	25	5:57	0.916	643.414	Continued to gradually drawdown at end of test.	25
VW-3	663	** *	17.7	645.3	25	6:02	0.423	644.877	Continued to gradually drawdown at end of test.	25
HW-001	661.62		16.6	645.02	36	5:55	1.186	643.834	Datum is based on MW-343	
HW-001A**	661.62		16.6	645.02	72	0:57	3.45	641.57	Datum is based on MW-343--Test segment is a continuation of the 36 gpm. test.	72
HW-002	660.74		13.2	647.54	25	20:20	9	638.54	Datum is based on MW-347 (May 1999)	25
HW-003	659.65		16.82	642.83	11.5	5:02	11.177	631.653	Datum is based on MW-556	11.5
HW-004	658.5		17	641.5	30	4:23	3.99	637.51	Datum is based on MW559	30
HW-004	658.5		17	641.5	75	0:27	11	630.5	Datum is based on MW559	
HW-005	657.43		16.16	641.27	35	5:48	3.047	638.223	Datum is based on MW-561	35
HW-006	659.68		18.01	641.67	30	4:37	5.463	636.207	Datum is based on MW563	30
HW-007	659.9		18.08	641.82	28	4:12	1.227	640.593	Datum is based on MW564	30
HW-007	659.9		18.08	641.82	50	1:41	2.215	639.605	Datum is based on MW564	
HW-008	661.62		17.78	643.84	30	2:00	2	641.84	Datum is based on MW 099---Test was cut short..drawdown is estimated	30
HW-009	662.59		15.48	647.11	30	4:38	2.355	644.755	Datum is based on MW 166	50
HW-010	664.64		17.02	647.62	30	5:03	2.111	645.509	Datum is based on MW 105	50
**See comment			*May 2000 data unless noted differently							
*** Unsurveyed datum...estimated										

ATTACH 3

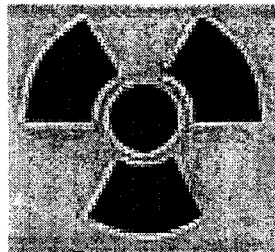
### HW003



HW 004



# Kelly AFB Radioactive Material/Waste Usage and Storage Sites



Jack Shipman - AFBCA/DK

Capt Evie Cornell - AFIERA/SDRH,  
Radioactive and Mixed Waste Office

11 Jul 00

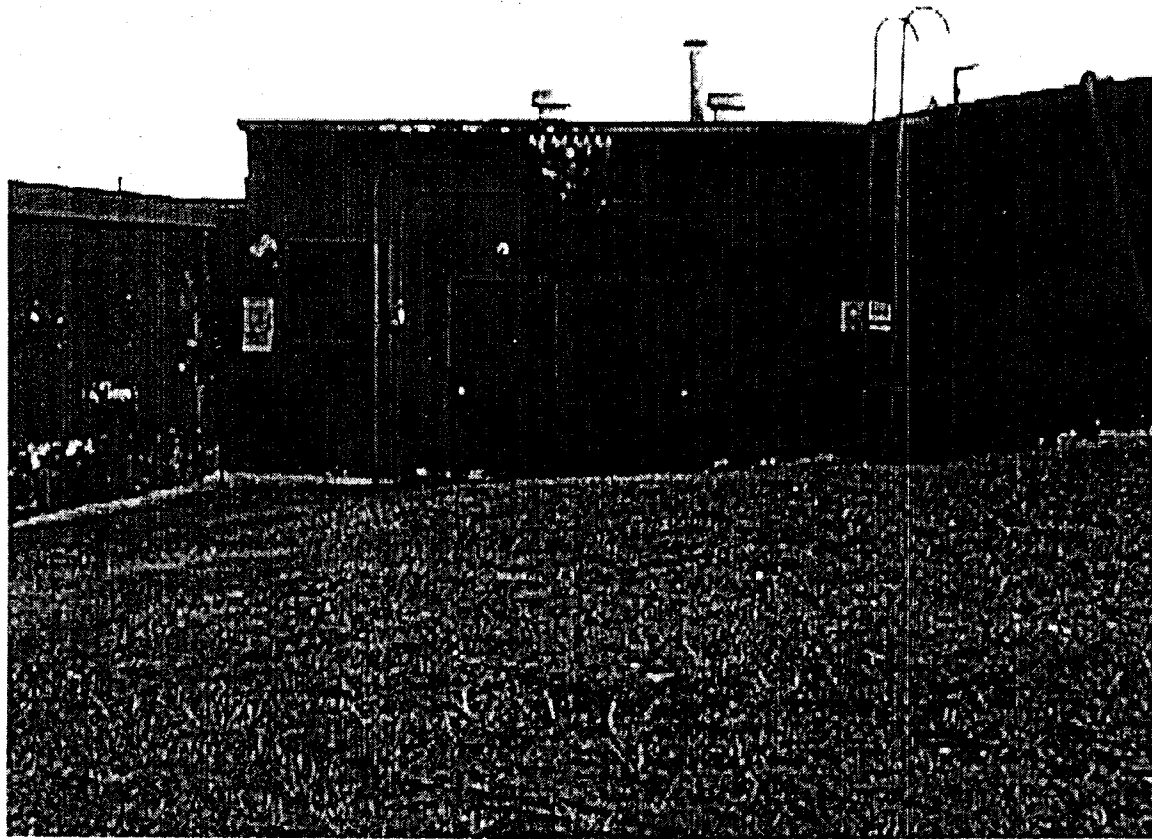
# Site Summary

- 27 Total Sites
  - 17 Active Sites (i.e., electron tubes and Depleted Uranium counterweights on aircraft ailerons/elevators)
  - 10 Historical Sites (i.e., former radium shops)
- Radioactive Sources Involved
  - Sealed (electron tubes in aircraft electronic equipment)
  - Unsealed (radium paint)
- Complete site list (available upon request)

# Investigations/Remediations

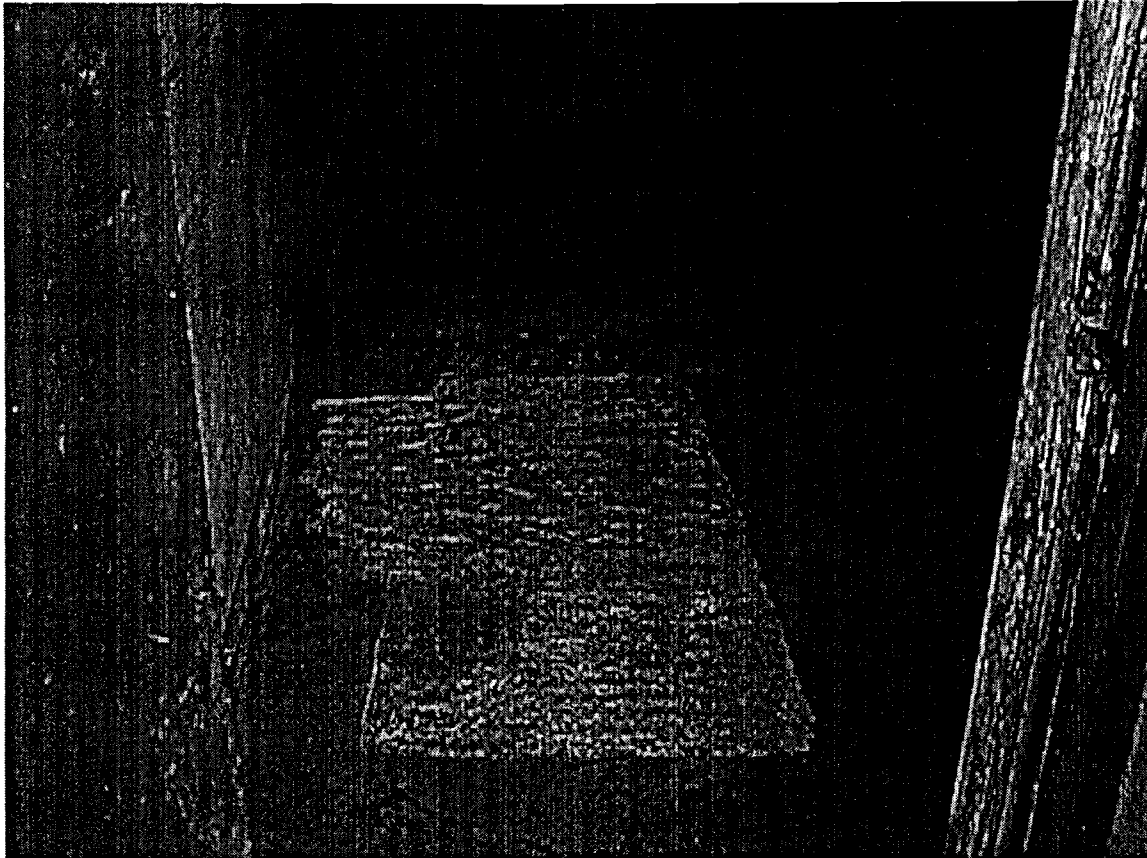
- 18 sites were surveyed in 1998 and 99
  - 5 sites showed slightly elevated levels of radiation and needed remediation
    - B620 Rad Waste Storage Area - was remediated down to background in Jan 00 (multi sources)
    - B1420 Nuclear Weapons Shop - was remediated down to background in Jan 00 (DU mixture)
    - B375-2LM Flight Controls Shop - will be remediated in Oct 00 (DU counterweights)
    - B324 Radium Shop - will be remediated in 2001
    - B326 Radium Shop - will be remediated in 2001

# B620 Former Rad Waste Storage Area

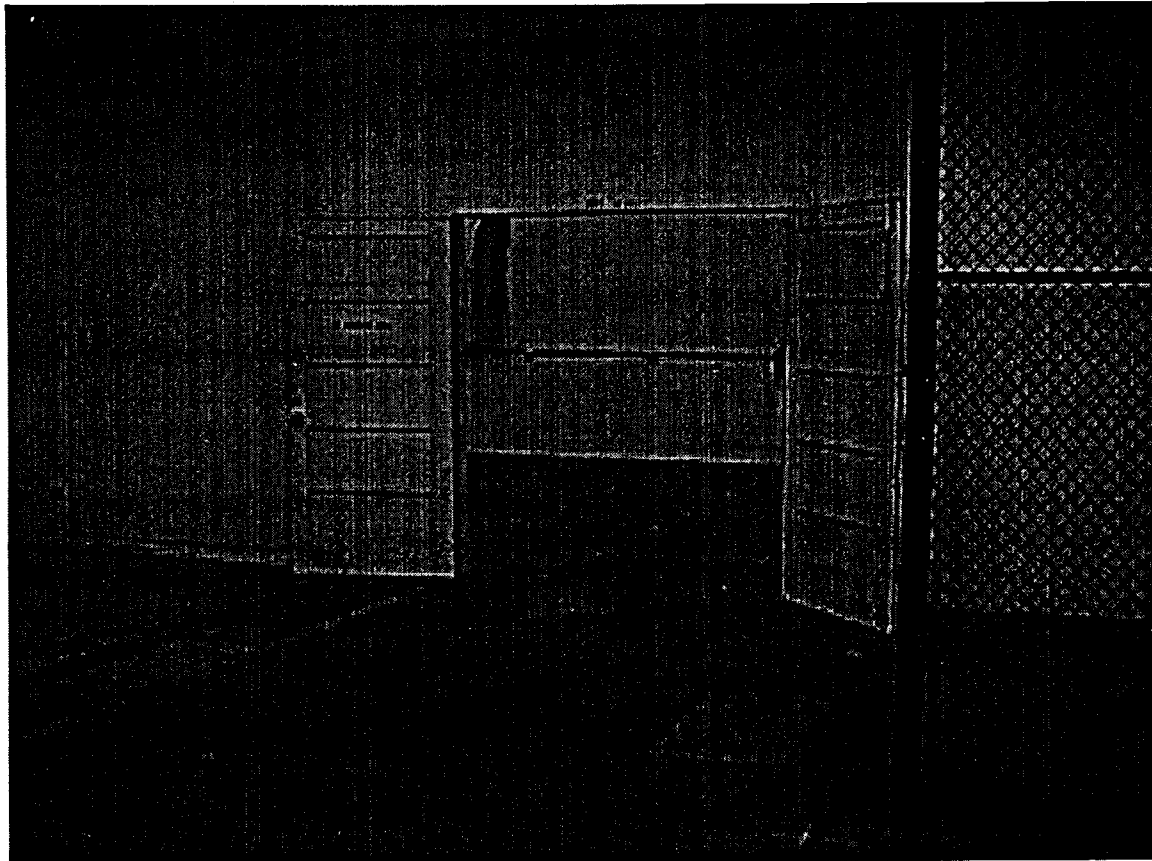




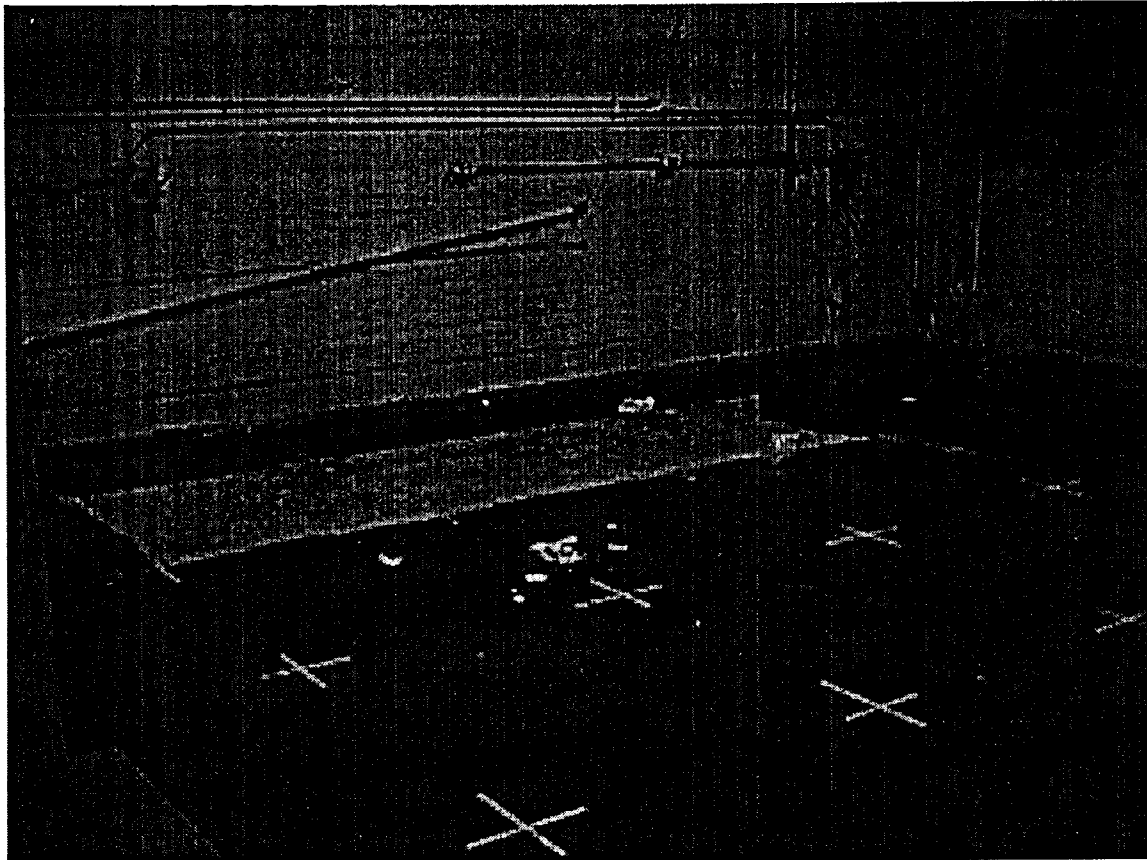
# B620 Scabbled Area



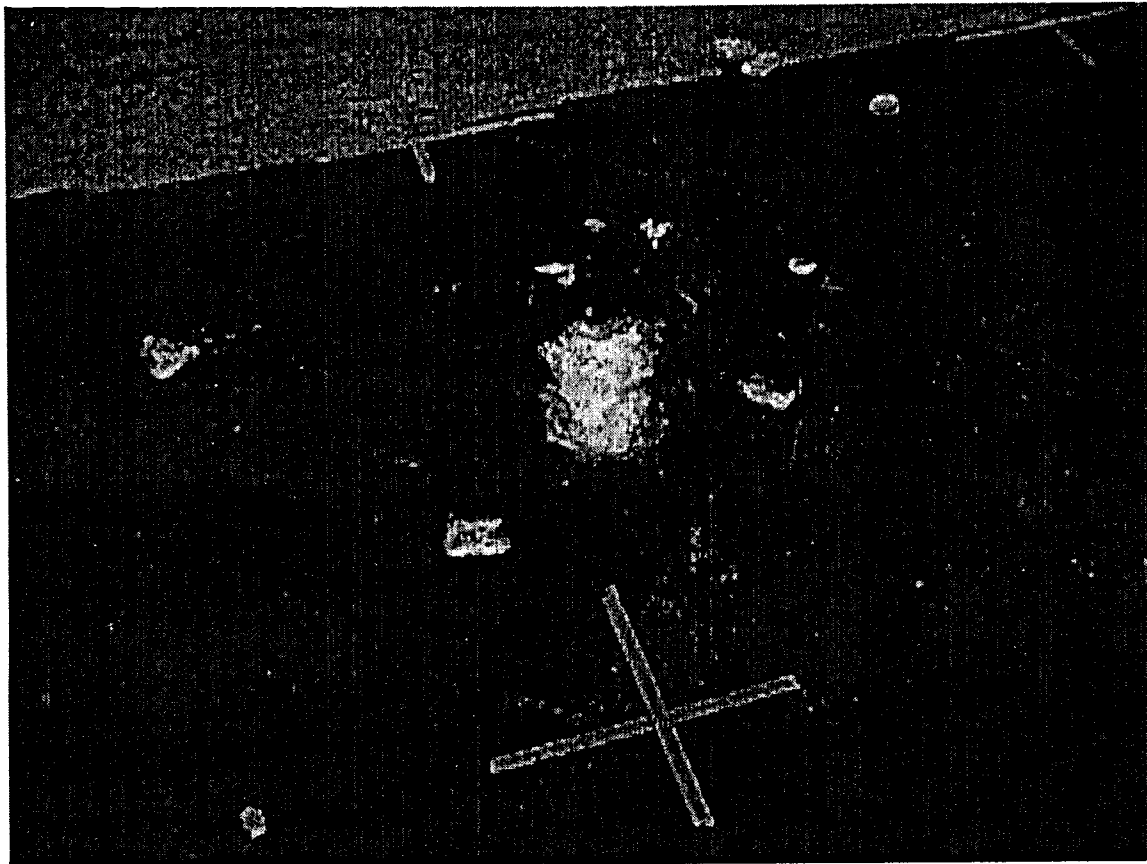
# B1420 Nuclear Weapons Shop



# B1420 Scabbled Area



# B1420 Scabbled Area



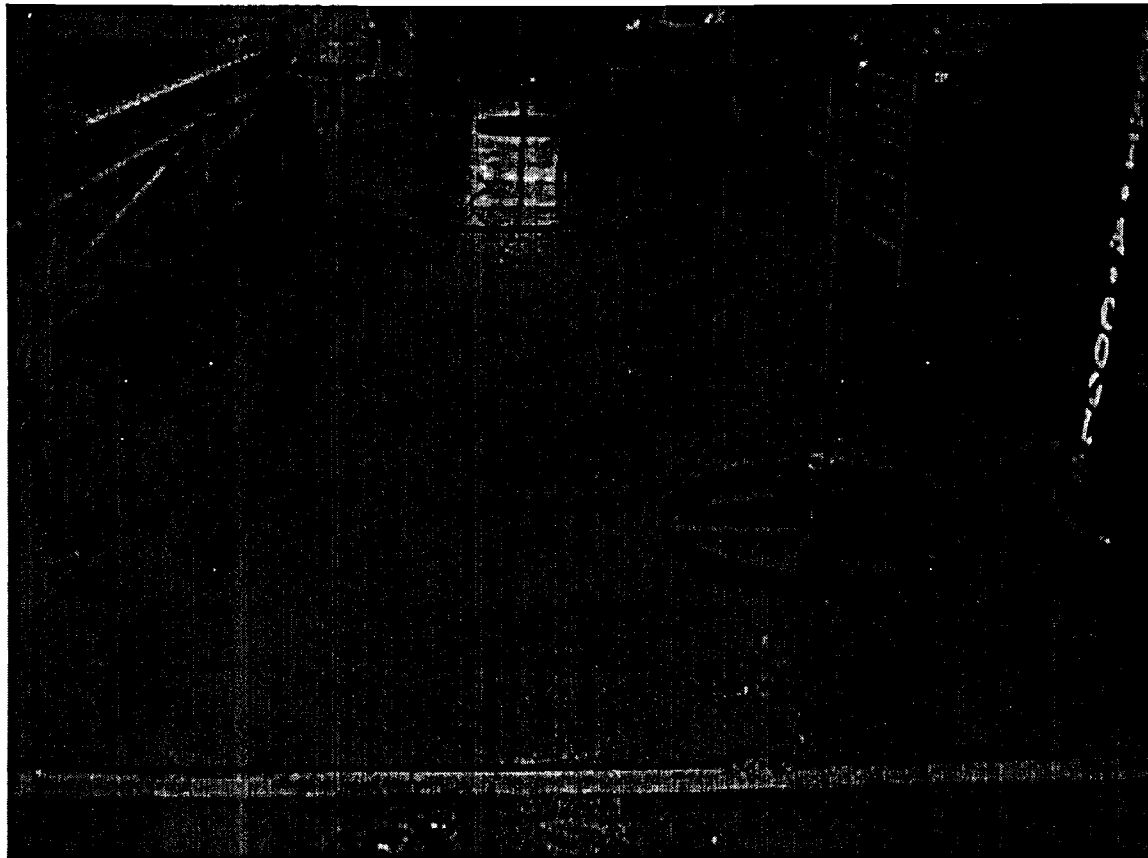
# B375-2LM Flight Controls Shop



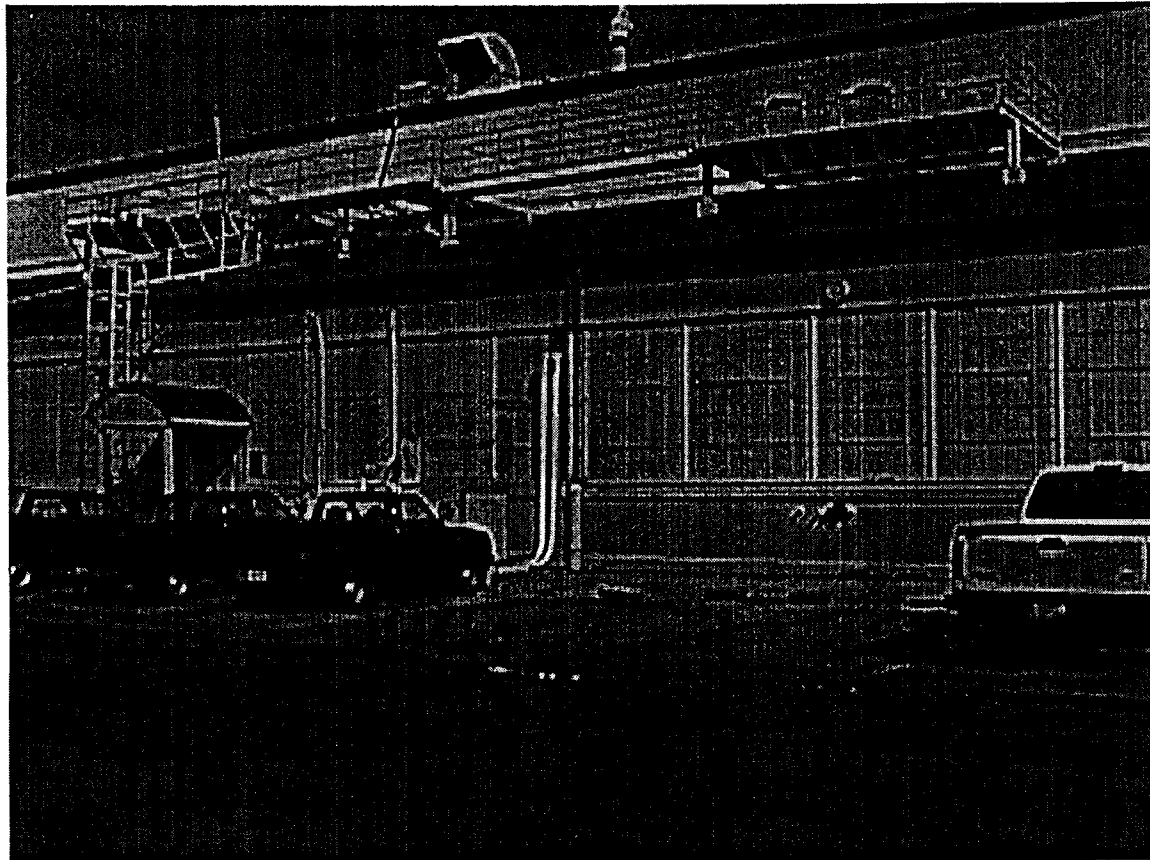
# B375-2LM Cracks



# B375-2LM Cracks

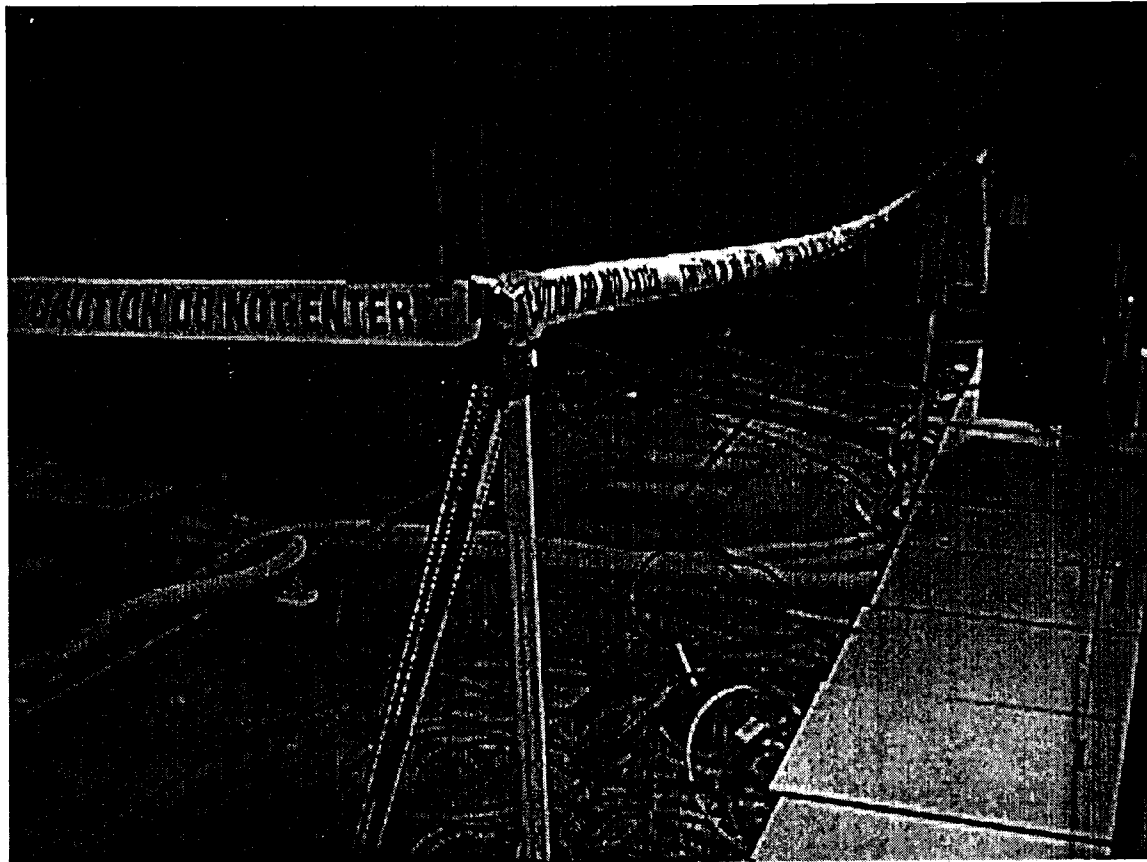


# B324 Former Radium Paint Shop

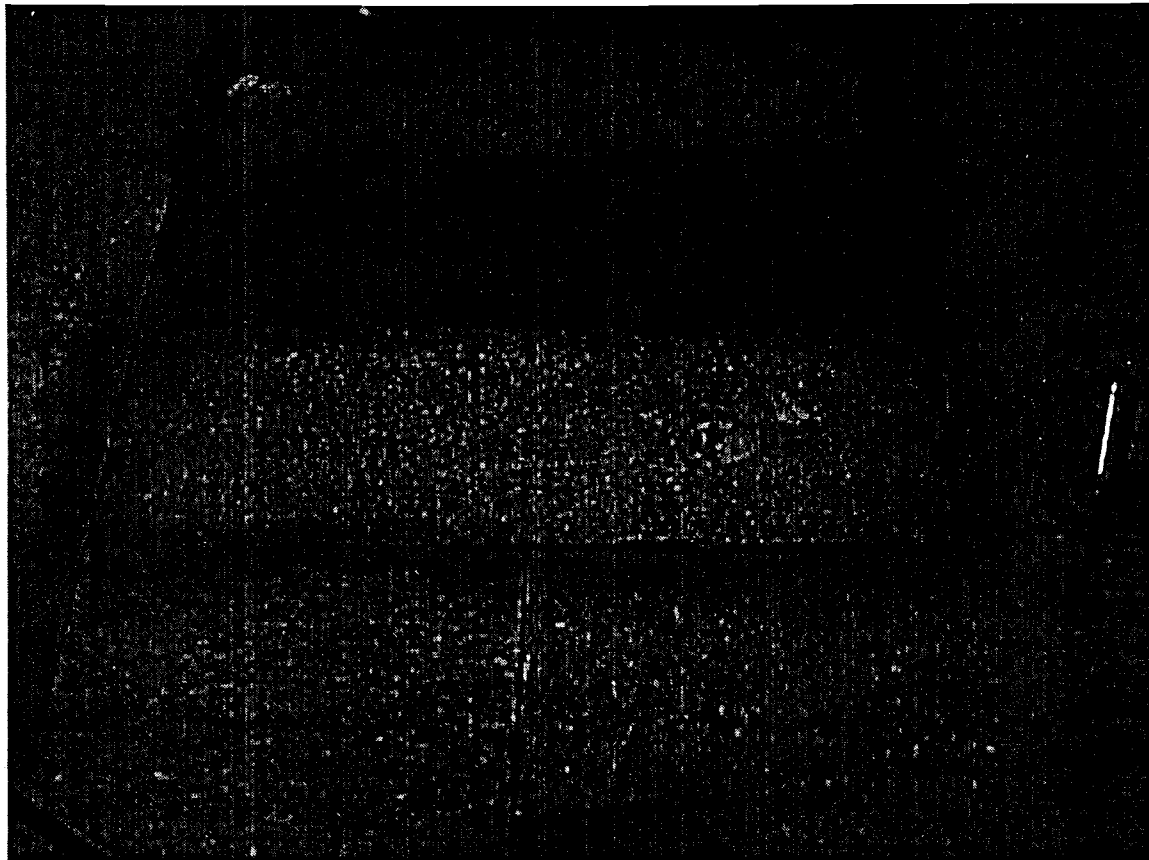




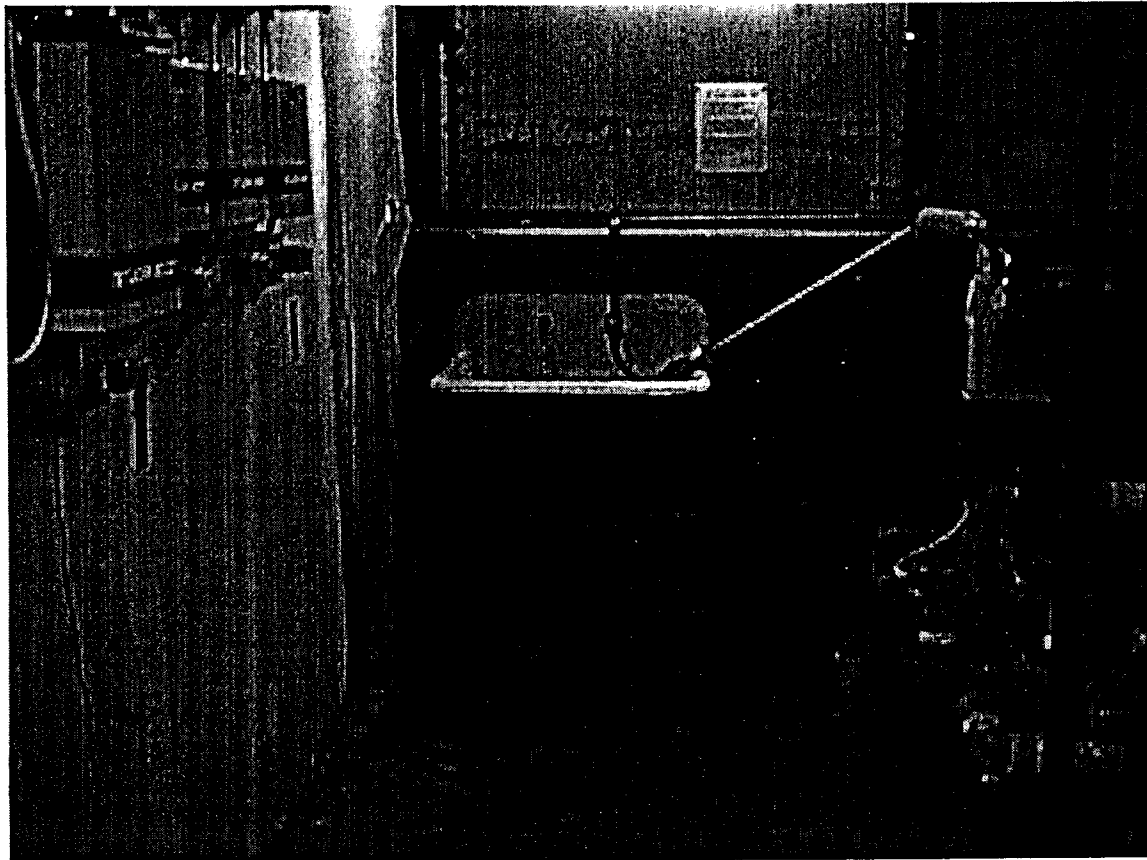
# B324 Computer Room, Under Raised Computer Floor



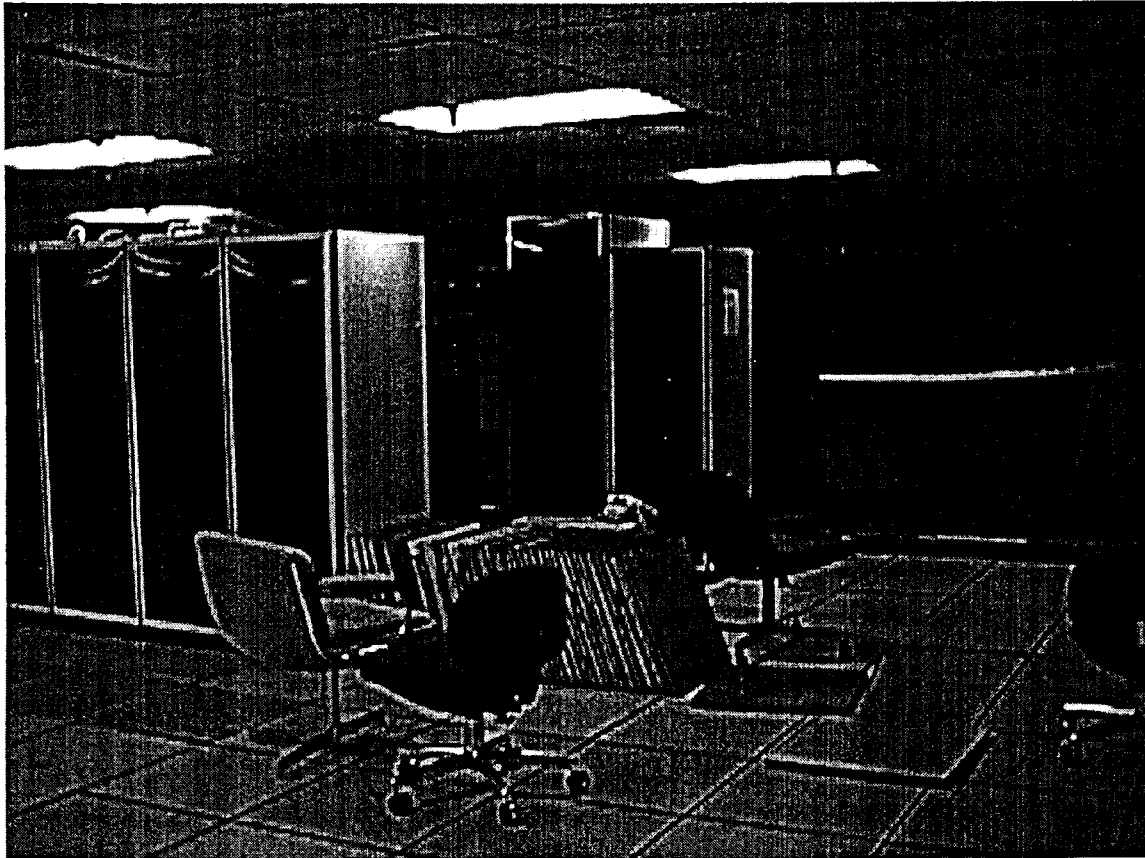
# B324 Scabbled Test Area



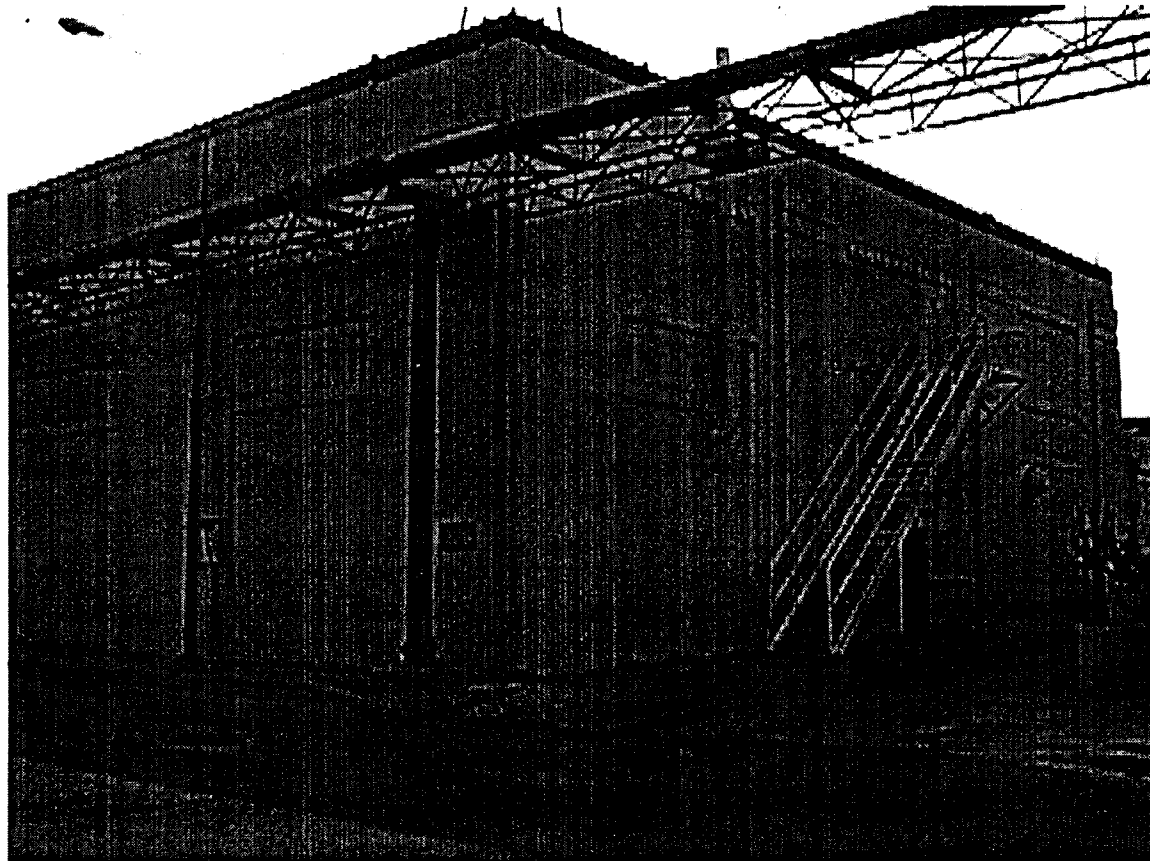
# B324 Sink



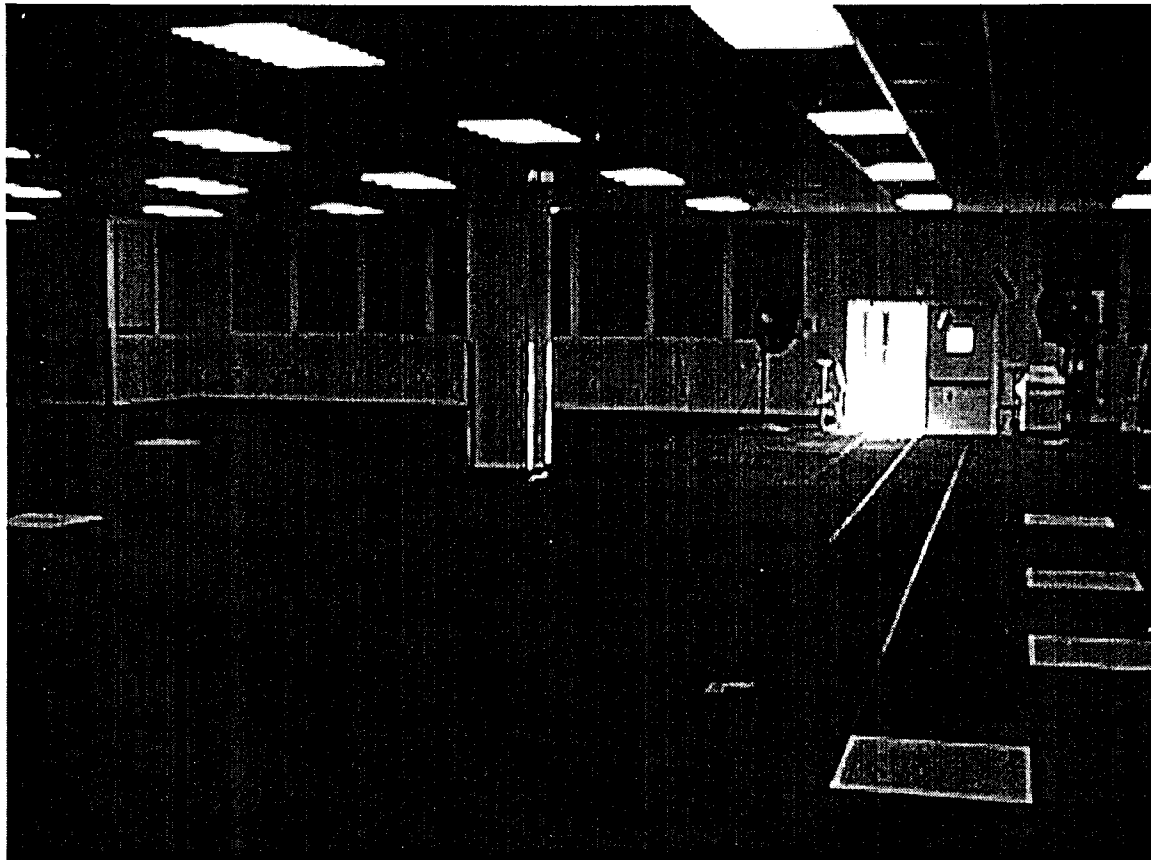
# B324 Network Substation



# B326 Former Radium Paint Shop



# B326 Area Above Contaminated Raised Computer Floor



# Investigations/Remediations

## (Cont)

- 9 Remaining sites will be surveyed in 2001
  - All are minor sealed sources (i.e. electron tubes in electronics equip and some test equip) except for
  - B1556 which is a large warehouse in DLA area, was the main Kelly Radioactive Material Storage Building. (Empty in Sep 00)

## 4 Former Radium Paint Shops

- Older two were surveyed in 1999, found to be below action levels and will be deed recorded.
  - B129 Instrument Room/Luminous Paint Shop (under B361) (1920-29)
  - B133 Instrument Room/Luminous Paint Shop (under B365) (1929-34)
- Newer two were surveyed in 1999 and 2000, found to have some radon and radium contamination and will be remediated in 2001
  - B324 Instrument Dept/Radium Paint Shop (1934-42)
  - B326 Instrument Dept/Radium Paint Shop (1942-52)



# Regulators

- AFMOA/SGOR, USAF Radioisotope Secretariat (RIC) - Has master license from the Nuclear Regulatory Commission and issues RAMPS (Radioactive Material Permits) to AFBs like Kelly. The RIC governs all radioactive material usage, disposal, etc., on active AF bases.
- TNRCC and TDH - Regulate non-federal facility civilian radioactive material usage and storage and waste in Texas
- EPA - Oversees State regulators and leads in absence of a state radiation program.

# Kelly Clean-Up Requirements

- EPA will lead - jurisdiction is on closure bases where the state prefers not to lead
  - 15 mrem annual dosage of radiation to a human, or a Risk-Assessed Value
  - We need EPA's approval for clear property transfer to GKDA
- NRC (RIC) - jurisdiction is mainly on active bases, but they want to issue closure permits and review all reports
  - 25 mrem annual dosage

# Kelly Clean-Up Requirements

## (Cont)

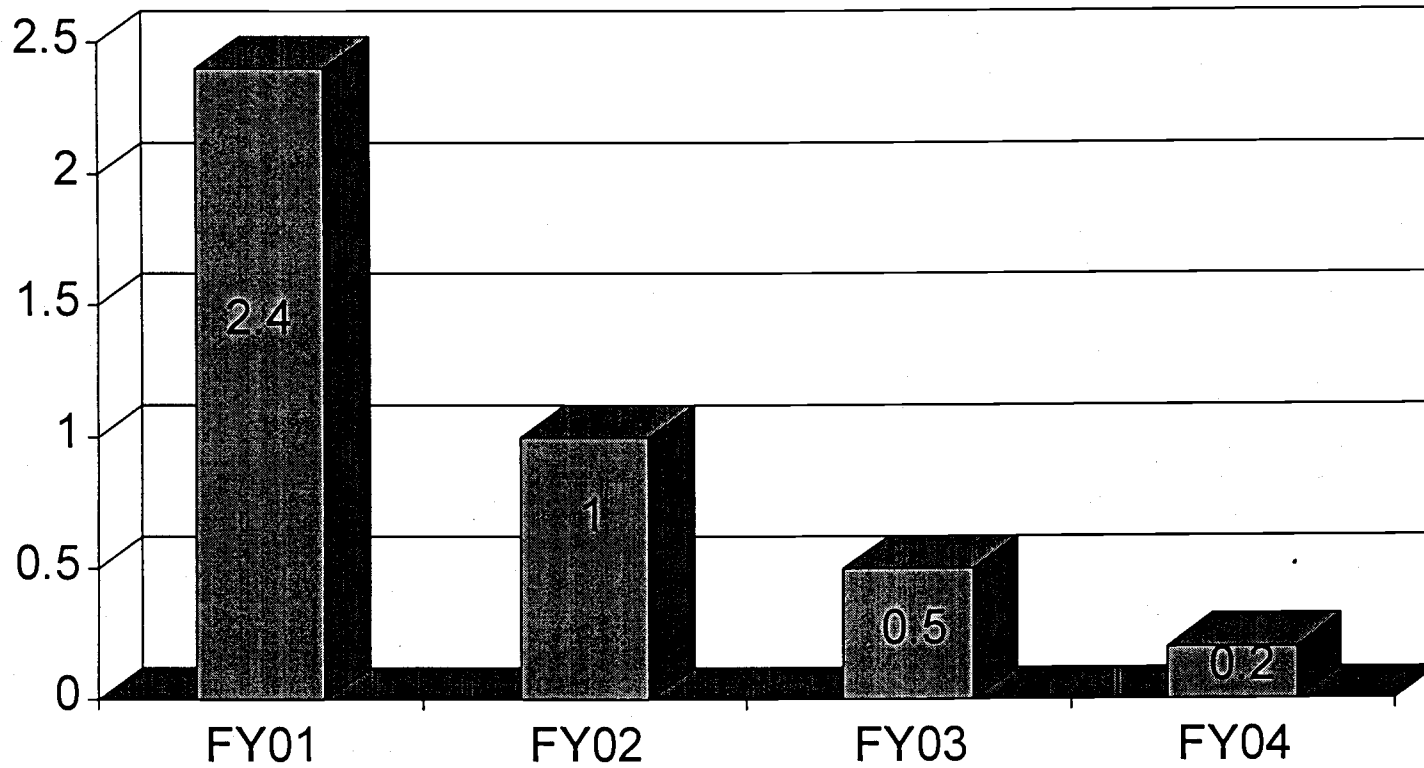
- State (TNRCC & TDH) - want copies of all closure reports and other documents
- AFBCA plans to survey all 27 sites and we will meet all of these requirements, primarily EPA's 15 mrem. If contamination is found, It is standard procedure to remediate it down to levels indistinguishable from background.

## NFAs

- Out of the 27 sites, we have
  - 7 NFAs from the RIC
  - 11 NFAs pending from the EPA
- We are preparing another 4 reports for NFA submission to the EPA

# Funding

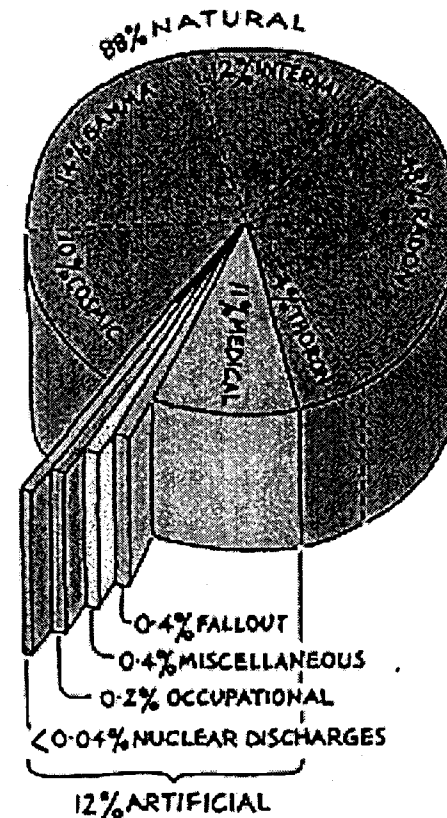
FY 01 to FY04 (in Millions)



Current as of 14 April 2000

# Health Information

- Average American gets 360 mrem of radiation annually from naturally occurring materials
- This 360 mrem comes from 88% Natural (radon, cosmic) and 12% artificial sources (medical, fallout)



## Health Information (Cont)

- 1 Rem is a measure of dose of any kind of radiation required to deposit 1 Joule of energy into 1 kg of absorbing material, such as body tissue.  
(millirem = 1/1000 of a rem)
- NRC release criteria (cleanup level) is set at 25 mrem/year annual dosage to a human
  - less than 1/10 th the average annual dosage received from natural sources (317 mrem)
- NRC states that a radiation worker is allowed a maximum of 5000 mrem/year

# Training for Kelly Workers

- 11 Mar - Base Radiation Safety Officer (RSO) provided training session for AF workers in Bldg 326 (former radium shop)
- 29 Mar - TDH provided training session for Lockheed/Martin network substation workers in Bldg 324 (former radium shop)
- 10 Apr - MKM Eng and Base RSO provided training session for LM/Boeing workers in Bldg 375-2LM (former flight controls shop)
- Bldg 324 & 326 EG&G facility maintenance workers - TDH has or plans to train as requested



# Summary/Questions

- AFBCA should have all 27 sites investigated by next year (2001) and remediated by 2002 to below EPA's 15 mrem cleanup level and also to levels indistinguishable from background
- Kelly Radiation sites are at very low levels and are no threat to human health or the environment

## BCT Meeting 11 July 2000

The meeting was held on Tuesday, 13 June 2000 at 9:00 am in the WPI Office, 12th floor conference room.

### Members Present and Support Personnel:

Name	Organization	Present	Absent
Brown, Leslie	AFBCA/DK		X
Buelter, Don	AFBCA/DK	X	
Callaway, Laurie	BCA (KPMG)	X	
Carrillo, Mike	EPA	X	
Farrell, Philip	GKDA	X	
Landez, Norma	AFBCA/DK	X	
Meshako, Chuck	AFBCA/DK	X	
Neff, Richelle	UNITEC	X	
Power, Abigail	TNRCC	X	
Price, Lisa Marie	EPA	X	
Rohne, Russell	AFBCA/DK	X	
Ryan, William	AFBCA/DK	X	
Stankosky, Laura	EPA		X
Underwood, Tim	BCA (KPMG)	X	
Weegar, Mark	TNRCC	X	
Wehner, Ellie	TNRCC		X

### Dates for upcoming meetings:

August 8, 2000  
 September 12, 2000  
 October 10, 2000  
 November 14, 2000  
 December 12, 2000

**BCT MINUTES**  
**11 July 2000**

Item #	Lead	Support	Discussion Topic	Comments	How will we know it's done?	Disposition
1.	Underwood, T.	BCT Members	Redevelopment Update	Update the BCT regarding redevelopment status at Kelly AFB.	Team receives update.	Closed. A recent Joint Use EIS public hearing had good public turnout. Citizens near Kelly are concerned about noise and increased "nuisance" flying in the mornings and evenings. Some residents have petitioned the City to rezone the residential property south of the runway but the City declined to rezone the area. A Kelly Parkway Hearing was scheduled for 11 July 00. The purpose of the hearing was to discuss the proposed highway east of the base. GKDA has suspended development of the Boeing hanger. Boeing is having internal discussions regarding capacity issues. The water systems on base are transferring to GKDA. GKDA is working with SAWS to transfer the water systems to them. Stormwater has not been transferred. Each tenant will apply for an individual stormwater permit. A final decision regarding the transfer of the EPCF should be made by 14 July 2000.
2.	Rohne, R.		Zone 5 Off base Investigation	Update the TNRCC and EPA on the status of the off base investigation.	Discussion is complete.	Open. Kelly proposed to install wells around the high PCE hit north of the base boundary and additional wells north of Highway 90 to delineate the off base plumes. Fieldwork is expected to start in late July. TNRCC will wait for the fieldwork results before commenting on the MitreTek report. Kelly will present the preliminary field results from the off base sampling at the September BCT meeting. The TNRCC and EPA will submit preliminary review comments to Kelly on the draft final Zone 5 CMS.
3.	Rohne, R.	CH2M Hill	Zone 5 Recommended Alternatives	Discuss the recommended alternatives for Plume A and Plume D and also discuss MNA.	Presentation is complete.	Closed. Kelly AFB will revise the draft final Zone 5 CMS based upon the comments received from the TNRCC and EPA.
4.	Buelter, D.		Kd values for Lead	Discuss Kd values for lead in Zone 2 and basewide.	Discussion is complete.	Closed. Lead was omitted from the previous Kd values list. The most recent lead Kd value was calculated at DRMO Yard 13. The Kd value for lead at Yard 13 is 3,100. Kelly will submit a letter to TNRCC requesting approval of the lead Kd value based upon the data from Yard 13.
5.	Peck, W.	Courtney, S.	Zone 4 RFI/CMS	Provide an update of the status of the RFI/CMS report.	Team receives update.	Open. The RFI/CMS contract was awarded two weeks ago. Additional sampling will be conducted in the Redhorse area to address a data gap on base. Additional monitoring wells will be installed off base to collect data to support the groundwater modeling effort. The RFI will be submitted in October and will include the results from the additional wells on and off base. In addition, a risk assessment addressing human health and ecological risk will be included in the RFI report. The CMS is scheduled for submittal in March 2001.
6.	Ryan, W.	Buelter, D. Peck, W. Rohne, R.	Zone Updates	Provide team with update of current activities in Zones 2, 3, 4 and 5.	Team receives updates.	Closed. Handouts distributed. The Zone 5 handout will be e-mailed to the BCT members.

Item #	Lead	Support	Discussion Topic	Comments	How will we know it's done?	Disposition
7.	Hampton, R. Landez, N.	SAIC	Zone 3 Nature and Extent	Discuss 300 Area RFI nature and extent.	Discussion is complete.	Closed. Kelly presented the conceptual approach for determining nature and extent in the Zone 3 RFI. Kelly has developed dot maps to define the extent of contamination at sites in Zone 3. Kelly has categorized the samples taken in Zone 3 as samples with detections above RRS 2, samples with detections between PQL and RRS 2, and samples with no detections. Samples with detections above RRS 2 have been delineated out to samples with no detections. By defining nature and extent with this approach the deed recordations will cover larger areas. If the deed restricts digging this will have an impact upon the redevelopment of the Zone 3 area. The risk assessment will determine if digging restrictions are required in the deed transfer documentation.
8.	Hampton, R.	SAIC	S-4 CMS	Discuss the S-4 CMS comments.	Discussion is complete.	Open. On Tuesday, the draft Site S-4 CMS response to comments were discussed with regulators. The regulators agreed that if the meeting on the following day goes well between the TNRCC modeler and contractors, then a Final CMS should be submitted after the responses were finalized and submitted. On Wed, Site S-4 CMS draft response to modeling comments were discussed with Charles Stone, Mark Weegar, Abbi Power, and Mike Carrillo and the Kelly AFB staff and support. Although the modeling clarifications appeared acceptable to TNRCC and EPA, Charles has asked to review the final responses prior to having Kelly finalize the report. The final responses will be submitted by Kelly to TNRCC no later than the 24th of July and Charles will review these responses and provide final approval of these responses.
9.	Buelter, D.		Zone 2 Site Closures	Discuss the site closure strategies for sites OT-1, FC-2 and S-9.	Discussion is complete.	Closed. Kelly briefly discussed the situations at OT-1, FC-2, and S-9 and the closure strategy for the Zone 2 sites. Site OT-1 overlaps with the IWTP site. Pesticides have been detected at OT-1. Kelly is proposing to close the site under RRS 3. Site FC-2 is the location of a former fire control training area. Metals at this site are near background. Historical SVOC data indicates elevated levels above RRS2. Additional sampling will be conducted. A bioventing system is in place and Kelly may extend the operation of the system. Site S-9 is the location of former fuel tanks. The tanks were removed in the early 1990s. The USGS identified a sludge spreading area at site S-9. Elevated concentrations of lead have been detected 8-15 feet below ground surface. The Zone 2 Soil FS was approved in 1997. Kelly is conducting the additional sampling for the closure documents and to determine the areas for deed recordation.
10.	Rohne, R.	Whitley, A.	1500 Area Closure	Present the 1500 Area closure strategy.	Presentation is complete.	Open. Kelly presented recent and historical data for the 1500 Area bioventing system. The system has been in place since 1993. Early respiration tests indicated significant respiration taking place however tests since 1995 have remained constant and indicate that respiration is no longer occurring. Kelly proposed to shut the system down and submit a closure report. The TNRCC and EPA agreed that a closure report should be submitted for this site. The TNRCC will let Kelly know if they can shut the system down prior to issuing the closure report.
11.	Ryan, W.	Weegar, M. Carrillo, M.	List of Future Deliverables (Regulators/RAB)	Each month, provide a list of upcoming documents for review.	Team receives list of upcoming documents for review.	Open. Handouts will be e-mailed to the BCT members along with the minutes.

Item #	Lead	Support	Discussion Topic	Comments	How will we know it's done?	Disposition
12.	Ryan, W.	BCT Members	BCT Teleconference Scheduling	Each month, establish the coming schedule of teleconferences.	Teleconference schedule adopted by the team.	Closed. A teleconference was not scheduled prior to the next BCT meeting.
13.	Ryan, W.	BCT Members	Begin August Agenda	Each month, begin to establish the next month's agenda at the end of the BCT meeting.	Team approves agenda items.	Closed. Agenda items for the August BCT are: <ul style="list-style-type: none"> <li>• Zone 4 RFI/CMS update</li> <li>• Hydrant System update</li> </ul>

JULY 11, 2000, BCT ZONE 2 AND 3 STATUS REPORT

PROJECT	STATUS	DELIVERABLE DATE
600 Area RFI	Tank holding area will be completed w/EPCF RFI data. OWSs are in the process of being removed. ITIR will not be submitted; data will be incorporated into closure reports.	
Zone 2 RFI	The TNRCC has approved our response to comments letter for Sites S-3 and 522 RFIs. Additional data is being collected for both sites, and digging permits have been started for fieldwork. The S-3 RFI and 522 Final report will be submitted by September 8, 2000. Site E-1 Draft Final report will be submitted Sept 8, 2000 also.	Site E-1 Draft Final Report – 8 Sept 00 Sites 522 and S-3 Final RFI Reports – 8 Sept 00
<i>RCRA Regulated Units</i>	Site SD-1: Final Report Submitted. Kelly AFB received comments on the final document from the TNRCC dated 19 Nov 99. Comment response prepared and submitted to TNRCC 9 Jun 00. Site SA-2: Final Report Submitted 11 Feb 00. <i>Comments received from TNRCC dated 1 Jun 00. Kelly AFB will request additional 120 days to submit response to comments.</i>	Comments to Site SD-1 Closure Report: 11 Jun 00. Site SA-2 Final Closure Report: 11 Feb 00
Zone 2 Site Closures	BCT agenda item.	Draft Final Closure Report: TBD
Soil Remedial Actions	Kelly AFB is in the process of looking at the entire data set from Sites S-9, FC-2 and OT-1 to determine final closure actions. BCT agenda item.	Draft Final Closure Report: TBD

<b>EPCF RFI</b>	Met on 18 Oct 99 to discuss sampling locations and rationale to complete the investigation in the EPCF area. EPCF Phase II WP was submitted 21 Apr. Phase II work <b>will be completed in August.</b>	
<b>GW Optimization Projects</b>	Site E-3 Optimization Upgrade: Fieldwork started 25 May 00 Site CS-2 NB Optimization Upgrade: Planned to start 30 Jul 00 Site S-4: Completing investigation and modeling for supplemental optimization on base (to supplement 4 well recovery system installed 15 Nov 00 and to replace the abandoned 10 UPRR recovery wells). Evaluating Upgrades for IWTP/CS2-SB	
<b>Building 258 RFI</b>	Additional field sample collection per BCT discussion in April	Draft Final RFI Report: Sep 00
<b>300 Area RFI</b>	Fieldwork for Phase 1 has been completed. Fieldwork for Phase 2 began in January. Phase III sampling will be completed near high concentration areas within the 300 Area. By including these areas, the RFI report will encompass groundwater throughout the 300 Area. Expect data back from 9 additional monitoring wells by July BCT.  Data being reviewed and discussed for No Further Action Sites. Bioaugmentation pilot study progressing near Building 360.	Field Data Summary Report: 30 Nov 99 Draft Final 300 Area RFI Report: Nov 00 Bldg 362 RFI Report: TBD Bldg 375 Trailer Holding Area Release Assessment: 30 Sep 00
<b>Zone 2 and 3 CMS</b>	Project has begun.	Draft Final CMS: Early CY01
<b>Site S-4 CMS</b>	Public comment period on CMS ended on 5 Nov 99. Received comments from TNRCC 16 May 00. Response to TNRCC/EPA comments due 16 July 00.	Final CMS Report: TBD
<b>Building 367 Hydrant System</b>	Tanks have been removed. Submitted information to TNRCC UST program. Path forward developed to achieve closure.	Draft Final Tank Closure Report: TBD

**JULY 11, 2000, BCT ZONE 2 AND 3 STATUS REPORT**

<b>Quintana Road Culvert</b>	<i>4,225 feet of culvert has been installed (100% complete). Street work and associated surface work all that remains. King Street extension insitu soil characterization currently ongoing.</i>	
<b>Site S-4 Closure Report (Soil)</b>	Final Report submitted.	
<b>IWCS Closure Project</b>	Final Draft of Report submitted. All field work and risk assessment support RRS 3 closure outlined in approved closure strategy documentation.  Service reroutes completed. Plugging of interior floor drains to be completed in early May 00. Cleaning and abandonment of lines, manholes and lift stations has begun and will be completed in fall.	Final Draft IWCS Closure Plan: Submitted 20 Apr 00.
<b>"RCRA" 51 Project</b>	Closure reports for nine sites in Zones 2, 3 & 5 are being prepared. Additional fieldwork must be accomplished to determine extent of contamination and deed recordation boundaries.	Draft Final Closure Reports: TBD.
<b>Site S-8 CMI-Work Plan</b>	Hearing was requested. Submittal currently under review by TNRCC.	
<b>Building 522 Soil Vapor Extraction System</b>	<i>Funding received from AFBCA. 30% design expected by 30 Sep 00. System installation to be complete by 30 Dec 00</i>	
<b>Quick Closure Project</b>	<i>Waste tanks at Building 360 have been removed. Currently removing OWS at building 303, 348 and 652.</i>	
<b>Underground Storage Tank Removals</b>	<i>Tank systems have been removed at Building 643 (test cell), Building 376 and Building 1512. PST closure reports to be submitted.</i>	
<b>Building 348 Release</b>	Project is to investigate near surface calibration fluid releases in the Building 348 Area. Air Force is reviewing draft report.  Optimizing existing bioslurper project. Sizing, procuring and installing the new blower system. Bio-Slurper system start-up.	Draft Final Investigation Report: TBD  Startup of system: 1 Aug 00



**ZONE FOUR  
RECENT PROGRESS/DEVELOPMENTS UPDATE  
11 JUL 2000**

**ZONE-WIDE ACTIVITIES:**

**OU-1 RI** - Additional fieldwork identified in the previous RFI Report was completed. Submission of the report is expected by 31 Oct 00.

**OU-2 RI** - The final item of fieldwork, the soil/vapor pathway sampling, has been completed. Test results were sent to ATSDR on 31 March for evaluation. Preparation of the RFI report continues with submission scheduled by 31 Oct 00.

**IRA Boundary Control** - The system has been completed and is operational. Official opening of the system was conducted 06 Jul 00. Some minor punch-list type items are being addressed.

**Shallow Aquifer Assessment** - Response to comments on SAA Phase III Draft Final were forwarded to regulators. SAA Phase IV Draft Final completed and forwarded to regulators for comment in April 00. Comments received from EPA.

**San Antonio River Sampling** - USGS and SARA fieldwork completed during June 1999. The final ITIRs have been received. ITIRs forwarded to regulators and are awaiting any comments. EPA has provided comments; awaiting comments from TNRCC. The revised SARA report containing the second phase sampling was provided to the TNRCC on 08 Jun 00. Once comments received and reviewed, reports can go final.

**ATSDR** - Provided information to Historical Air Emissions Report and Informal Technical Information Report, Zone 4 OU-2 and Site S-4 Soil Vapor Monitoring. ATSDR plans to release several documents as part of the PHA in 2000.

**SWMU Assessment** - Historical survey and research of aerial photographs completed. Additional site specific evaluations scheduled through Dec 2000.

**Oil Water Separator Removal** - Contract for removal of three East Kelly OWS initiated using Performance Based Contracting. Award pending.

**DRMO FACILITIES:**

**Bldg 3096** - Revision 1 to the Closure report, including comment responses from previous submissions, completed and forwarded 20 Apr 00. Currently awaiting final review and concurrence on unit closure from TNRCC. The TNRCC letter regarding this closure request has been received and referred for action.

**Yard N** - No change. Closure requested, Oct 98. TNRCC review date projected as ~~30~~ Sep 99.

**Bldg 3065** - Approval of Closure report received in November. Survey and deed recordation was accomplished and submitted to the TNRCC in January 00.

**Lot Z04** - Final Closure Report submitted to the TNRCC on 23 Nov 99. Approval received from TNRCC. Survey and deed recordation documents prepared.

**Yard 13** - The review of the draft data study has been conducted and the draft final has been received. Comments and discussion is in progress with a final document expected later this month. Acceleration of funding for an IRA soil removal action has been requested.

**JULY 11, 2000 BCT ZONE 5 STATUS REPORT**

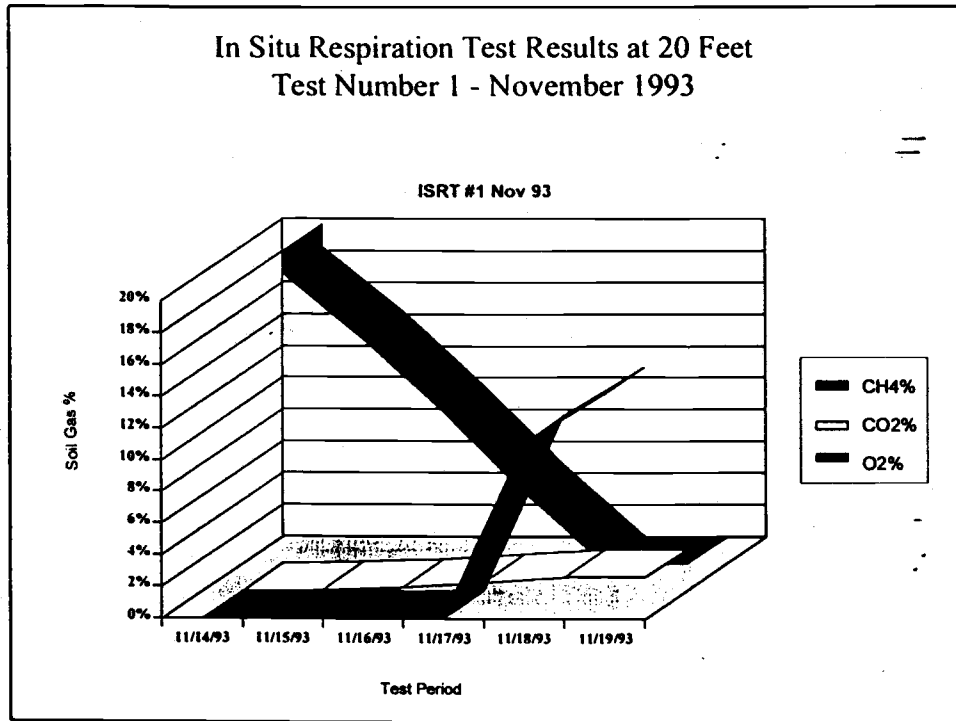
PROJECT	STATUS	DELIVERABLE DATE
Zone 5 RFI	Revised pages completed IAW regulator comments.	11 Jan 00
Zone 5 CMS	Draft CMS for Zone 5	22 Feb 00
Site S-1 (SS003) IRA	Excavation/backfill completed 1 Dec 99. SVE system completed. <i>SVE wells to be developed in case needed for groundwater recovery.</i>	
1500 Area Bioventing	<i>Gathering data for shutting off system. Will propose 6 month shutdown, then sampling/analysis. Need to discuss Compliance Plan requirements.</i>	
Warehouse Area SWMUs	B1420: Closure report submitted 15 Nov 99. Pending regulator review.  B1501 OWS: work ongoing.  B1501 vaulted oil tank: pending contract mod.  B1519 wash rack: TNRCC concurs with NFA.	15 Nov 99 ( <i>We have not received approval. Need to check on this closure</i> )
SWMU Closures	B50 OWS: Closure report (RRS2) submitted 3 Dec 99. Request regulator concurrence.  B70 OWS: Additional investigation ongoing.  B894 OWS: Closure report (RRS2) submitted 3 Dec 99. TNRCC approved report on 23 Dec 99. Certificate of remediation has been filed with Bexar County. Certificate of Deed recordation mailed to regulators 23 Feb 00.  B914 OWS: Timeline Building 914 demo changed from 2002 to 2001. Kelly plans to close site at time of building demolition (2001). Letter was sent 10 Jan 00. Pending regulator response.  B920 OWS (removal/replacement): RRS2. Pending contract mod.  B946 OWS (removal/replacement): RRS2. Pending contract mod.  B966 OWS: Additional investigation required for closure. USACE has submitted a New Contract Solicitation SOW dated 26 Jan 00 to contractor. SAIC began work on 14 Jun 00. Installed one soil boring and one monitor well per TNRCC comments. Samples taken - awaiting analysis.  B1147 OWS (removal/replacement): RRS2. Pending contract mod.  B1151 OWS (removal/replacement): RRS2. Pending contract mod.  <i>B1418 Lift station/OWS: Investigations are ongoing. Drainlines have been removed and 4 soil borings completed. Trench and boring samples were ND. Trench backfilled and lines plumbed to new lift station. Further investigations will be submitted in a single report.</i>	3 Dec 99 ( <i>We have not received approval. Need to check on this closure</i> ) (Also need to check on Bldg. 3003, SWMU 73. It was sent in at the same time.)  23 Feb 00  10 Jan 00 ( <i>Have had no response</i> )

## Kelly AFB 1500 Area Bioventing System



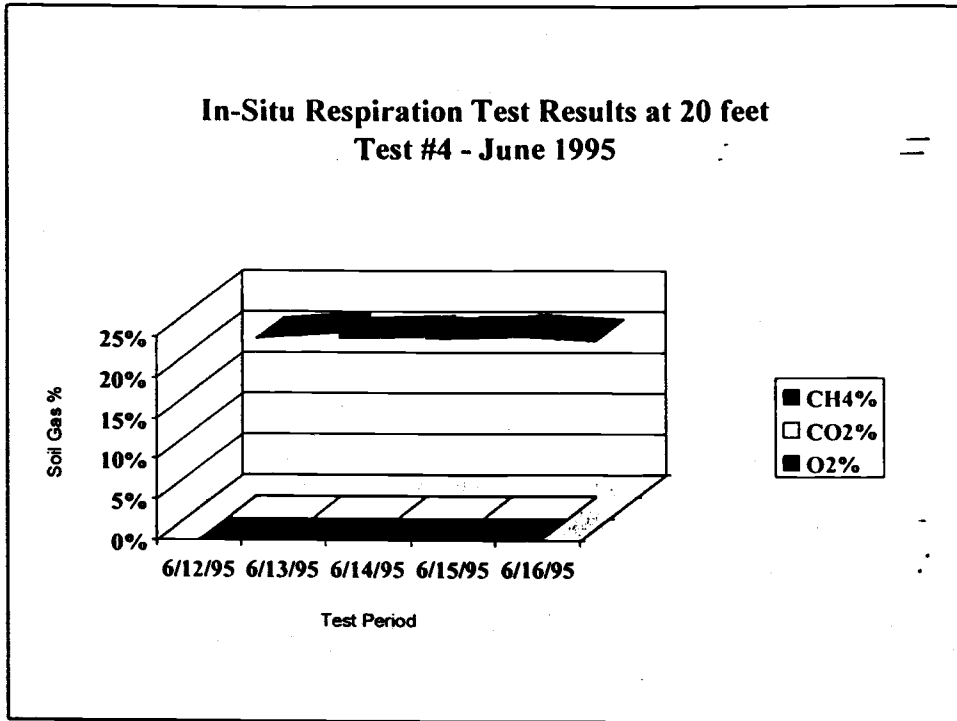
### KELLY AFB 1500 AREA BIOVENTING SYSTEM SITE HISTORY

- Sep 1990 Discovery and Abatement of Release
- Nov 1990 Delineation of Contamination  
Jul 1991
- Jul 1992 Monitor Well and Soil Vapor Extraction Well  
Installation
- Oct 1993 Bioventing System Installation
- Nov 1993 System Start-up/In-Situ Respiration Test (ISRT) #1



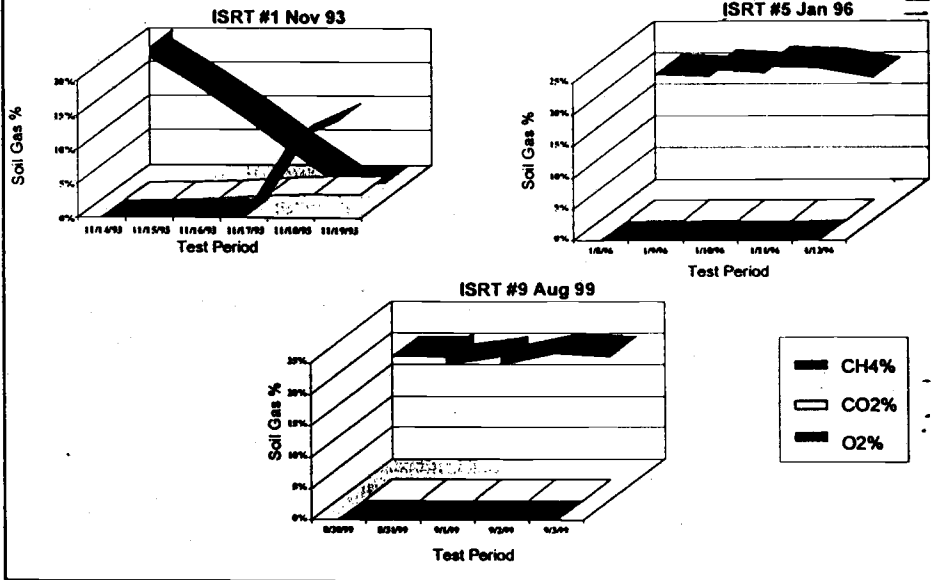
**KELLY AFB 1500 AREA BIOVENTING SYSTEM  
SITE HISTORY**

- Jun 1994 - ISRT #2 - #4  
Jun 1995



- ### KELLY AFB 1500 AREA BIOVENTING SYSTEM SITE HISTORY
- Nov 1995      Confirmatory Soil Borings
  
  - Jan 1996 -      ISRT #5 - #9  
  Aug 1999
  
  - Jun 2000      Confirmatory Soil Borings

### Representative In Situ Respiration Test Results at 20 Feet Numbers 1, 5, & 9



### KELLY AFB 1500 AREA BIOVENTING SYSTEM PROPOSED CLOSURE SCHEDULE

- Jul 2000 Shut Down of System
- Data Evaluation/Compilation
- Closure Report/Letter

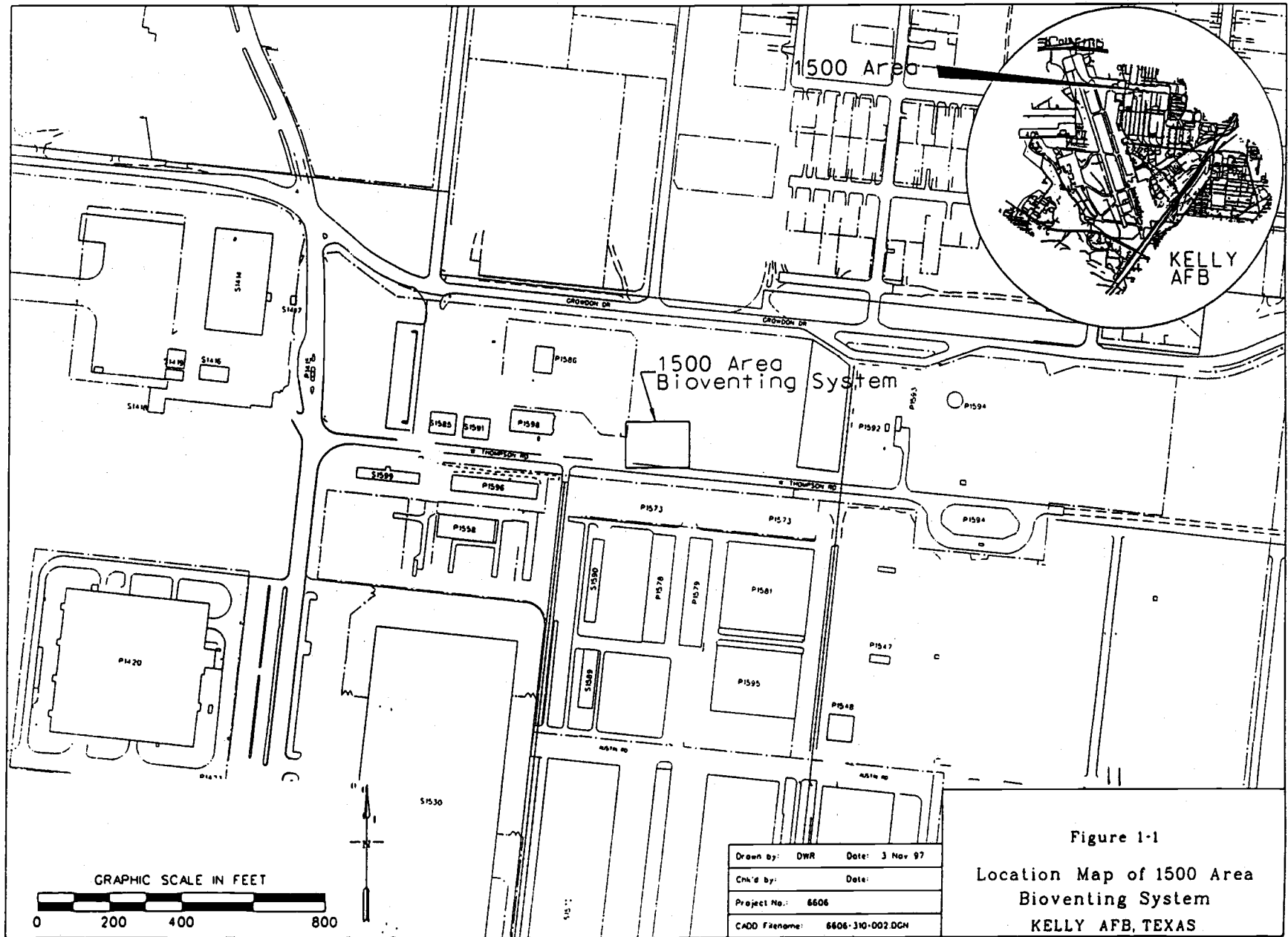
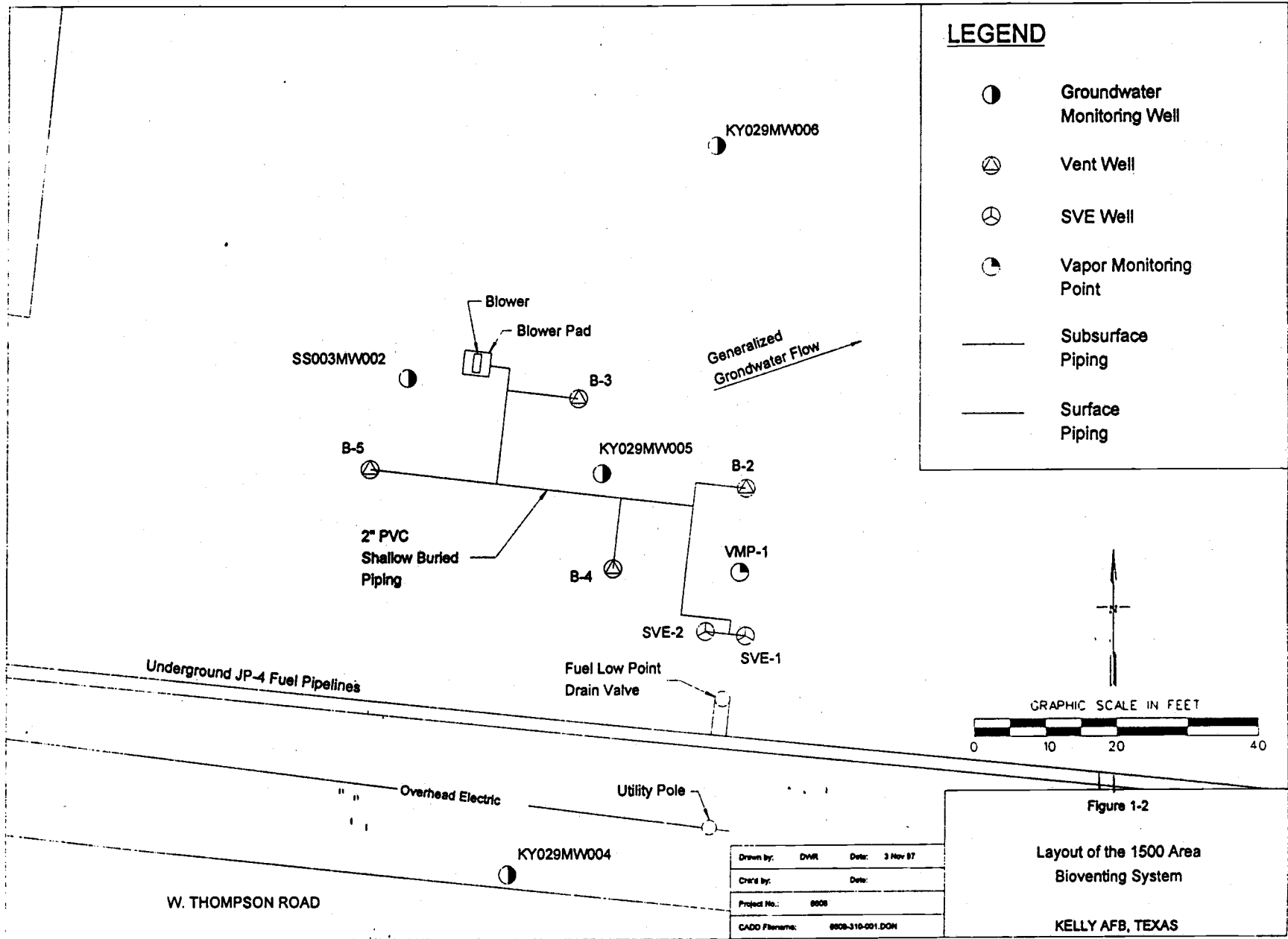
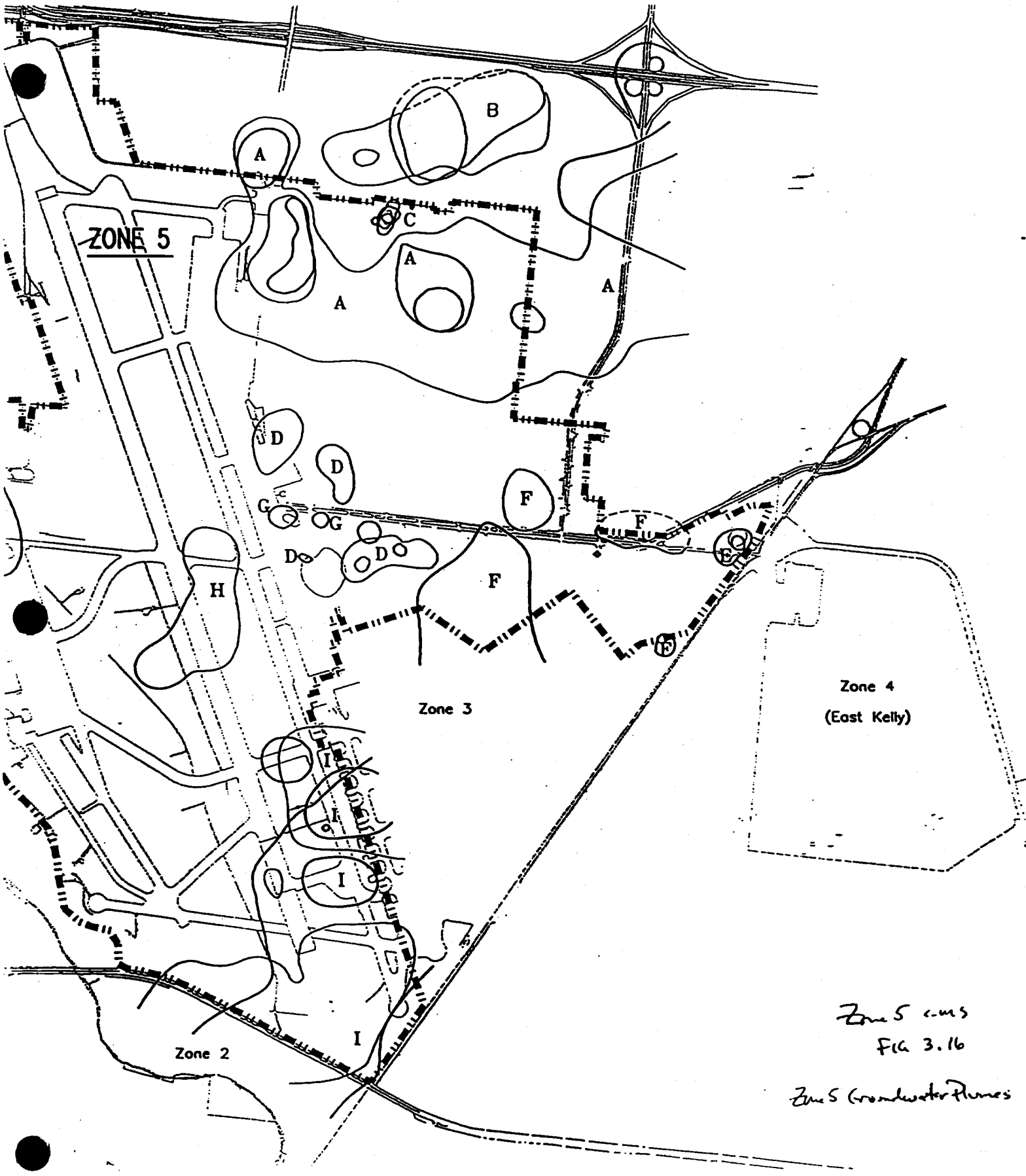


Figure 1-1  
Location Map of 1500 Area  
Bioventing System  
KELLY AFB, TEXAS







Zone 5 c.m.s  
FIG 3.16  
Zone 5 Groundwater Plumes

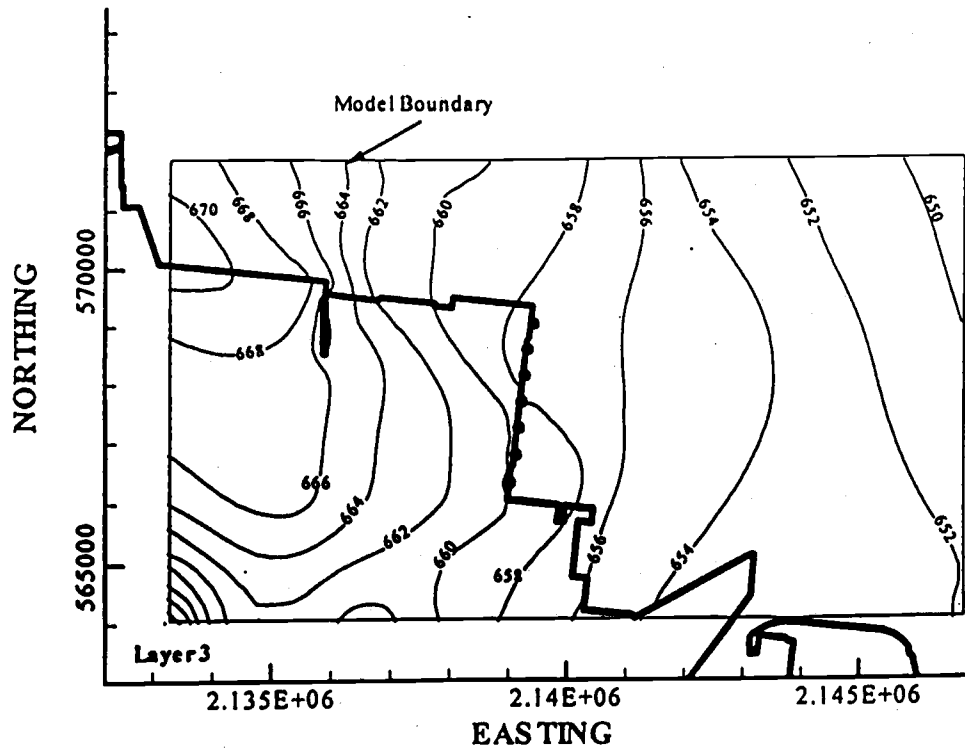
**Table 1**  
**Simulated Time (years) for the Maximum Concentration To Reach the MCLs at Plume A**

Alternative	Time to MCL (years)					
	TCE (5 ppb)		DCE (70 ppb)		VC (2 ppb)	
	On Base	Off Base	On Base	Off Base	On Base	Off Base
Baseline (e.g. MNA)	26	20	13.5	0	29	26
Source-Area Trench	20.5	20	10.5	0	22	26
Perimeter Trench	26	17	13	0	28	18
Perimeter Wells	26	18	13	0	27	18
Off-Base Wells	26	18	13	0	28	20
Source-Area Trench and Perimeter Wells	20	19	10.2	0	21	21
Source-Area Trench, Perimeter Wells, and Off-Base Wells	20	19	10.2	0	21	21

**Table 2**  
**Simulated Time (years) for the Maximum Concentration To Reach the MCLs at Plumes D, H, and J**

Plumes	PCE	TCE	DCE	VC
<b>Ambient Conditions (e.g. MNA)</b>				
D	26	28	13.5	26
H	-	6.5	<1	<1
J	6.5	<1	<1	2.5
<b>Pumping Conditions</b>				
D	21	22.5	<1	19
H	-	5	<1	<1
J	5	<1	<1	2

\*MNA – Monitored Natural Attenuation



Well Name	Easting (feet)	Northing (feet)	Well Head (feet)	Flow (gpm)
Peri_RW-1	2139274	568295	654.29	14.04
Peri_RW_2	2139124	566795	654.30	7.82
Peri_RW_3	2139074	566495	655.29	5.32
Peri_RW_4	2139274	567945	654.88	2.92
Peri_RW_5	2139224	567595	657.23	2.75
Peri_RW_6	2139174	567245	656.59	2.30
Peri_RW_7	2139174	567045	656.12	1.69
S_tmch_1	2135874	569495	662.78	0.30
S_tmch_2	2135874	569445	662.92	0.13
S_tmch_3	2135874	569395	662.99	0.11
S_tmch_4	2135874	569345	663.02	0.11
S_tmch_5	2135874	569295	663.01	0.12
S_tmch_6	2135874	569245	663.10	0.11
S_tmch_7	2135874	569195	663.05	0.12
S_tmch_8	2135874	569145	663.00	0.13
S_tmch_9	2135874	569095	662.94	0.13
S_tmch_10	2135874	569045	662.89	0.15
S_tmch_11	2135874	568995	662.86	0.17
S_tmch_12	2135874	568945	663.00	0.14
S_tmch_13	2135874	568895	662.97	0.17
S_tmch_14	2135874	568845	662.93	0.18
S_tmch_15	2135874	568795	662.90	0.20
S_tmch_16	2135874	568745	662.88	0.23
S_tmch_17	2135874	568695	662.85	0.26
S_tmch_18	2135874	568645	662.85	0.31
S_tmch_19	2135874	568595	662.83	0.41
S_tmch_20	2135874	568545	662.80	1.09
			Total Flow	41.38

Figure 6-6 Head and Flow Field for Source-Area Trench and Perimeter Well Extraction System



**LEGEND:**

Navarro Group  
Contour (feet)

Zone Boundary

**NOTES:**

1. Elevations Geodetic
2. Contour in
3. Contours NGVD elev spatial vari

Zone 5

Zone 5 Contours  
Ft. D. 2

Surface Topography  
for Top of Navarro Group

SU

Zone 5, Correctiv





**FINAL PAGE**

**ADMINISTRATIVE RECORD**

**FINAL PAGE**