



KELLY AFB
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 3280

Kelly Restoration Advisory Board

Technical Review Subcommittee

Meeting Agenda

September 10, 2002, 6:30 – 9:00 p.m.
Environmental Health & Wellness Center
911 Castroville Road
(previously Las Palmas Clinic)

- I. **Introduction** Dr. Gene Lené
 - a. Agenda Review
 - b. Packet Review

- II. **Technical Assistance for Public Participation (TAPP) Review of the RCRA Facility Investigation, Building 258 Solid Waste Management Unit (SWMU)** Mr. Patrick Lynch

- III. **TAPP Program Administrative Issues** Mr. Doug Karas

- IV. **Administrative** Dr. Gene Lené
 - a. BRAC Cleanup Team (BCT) Update
 - b. Spill Summary Report
 - c. Documents to TRS/RAB
 - d. Action Items
 - e. Request for Agenda Items

- V. **Next TRS Meeting**
Environmental Health and Wellness Center: December 10, 2002 / 6:30 p.m.

- VI. **Adjournment**

Sept. 2002

**Kelly Restoration Advisory Board (RAB)
Technical Review Subcommittee (TRS)
Meeting of September 10, 2002**

Attendees

Air Force Base Conversion Agency (AFBCA):

Mr. Ryan, William

Booz Allen & Hamilton (Booz Allen):

Ms. Best, Christine
Ms. Costello, Carol
Mr. Courtney, Scott
Mr. Davis, Ron
Mr. Martinez, E.

CH2Mhill:

Mr. Clary, Jim

Clearwater Revival Company:

Mr. Lynch, Patrick

Community:

Mr. Galvan, Ben
Mr. Garcia, Rodrigo
Dr. Lene, Gene
Mr. Montoya, Joe
Mr. Murrah, Sam
Mr. Perez, Nazarite
Mr. Quintanilla, Armando
Mr. Silvas, Robert

Environmental Protection Agency (EPA):

Mr. Miller, Gary

San Antonio Metropolitan Health Department (SAMHD):

Ms. Cunningham, Kyle
Ms. Hernandez, Blanca
Ms. Kaufman, Linda
Ms. Martinez, Deborah

Smith & Associates:

Dr. Smith, David

Texas Natural Resource Conservation Commission (TNRCC):

Ms. Power, Abbi
Mr. Weegar, Mark

Introduction

Background materials were presented to attendees. This package consisted of the agenda for the evening's meeting (Attachment 1), minutes of the August 13, 2002 TRS meeting, BRAC Cleanup Team (BCT) meeting, a presentation of the review of the Technical Assistance for Public Participation (TAPP) program and a draft RAB membership application.

Review of Solid Waste Management Unit (SWMU)

The current status of the corrective measures being taken by the Air Force in the area of former Buildings 258, 259 and 259 A were covered (Attachment 2). This is the center of the dense non-aqueous phase liquid (DNAPL) area.

Slurry walls 300' long in a square shape have been constructed in order to contain the DNAPL. Also, a ground water pump and treat system has been installed at the site boundary. Measurements of the groundwater on both sides of the wall have been taken. In addition to DNAPL, arsenic was found both inside and outside the wall. However, the concentration was less than the maximum contaminant level (MCL) allowed by federal standards for drinking water. There is some leakage of DNAPL from outside the wall to the inside of the contained area because of differential pressure. In order to enhance long-term monitoring, the construction of well pairs was suggested.

It was concluded that the activities of the Air Force have been appropriate in furthering the recovery of the area.

Questions from the Committee members included the following:

Q. What is the depth of the slurry wall?

A. It is 40-46' deep, reaching into the Navarro clay level.

Q. Is the wall designed to leak?

A. No, but actually the leakage is beneficial as DNAPL in the area outside the wall leaches into the walled-off area and results in more rapid restoration. In the future, there will be improved monitoring of the leakage around the wall.

Q. Where are the present wells around the slurry walls?

A. Mr. Lynch provided a diagram.

Q. What is the time frame for the recovery of the area?

A. In the area to the east of the plume, it is estimated that in 9 years, recovery will be complete. In the building 258 area, given that 1,000 gallons of DNAPL per year are emitted, and that the rate will slow in the future due to decreases in pressure, recovery will require more than sixteen years.

Q. What is the effect of the excessive amount of rain on recovery?

A. Rain basically has a negative effect, as it fills up and dilutes the interior of the slurry wall, simultaneously increasing pressure within the wall. As a result, less inward movement of DNAPL from outside the wall occurs.

Q. Can foul smells in the area be related to the evaporation of DNAPL from this area?

A. Without further details, this is difficult to answer, but a cause and effect relationship seems unlikely. The area in question is now covered by a parking lot.

Q. Are there more details than the current interim Clearwater report (Attachment 3)?

A. Specific questions should be submitted in writing and will be answered. The final report is due to be presented to the Restoration Advisory Board (RAB) at their meeting in November 2002.

Q. Will the proposed Kelly Parkway construction endanger the areas where the plume exists in the groundwater layer?

A. This is an important area for further investigation. Soil studies and maps will be made available for further examination.

Technical Assistance for Public Participation (TAPP) Process

The function of Booz Allen to act as a single point of contact between the various groups was restated.

The framework for identification of projects and obtaining funding was reviewed (Attachment 4). At present there is a budget surplus of \$22,278.50 which can be devoted to projects of interest to the group. There was some concern about the provision of future funding, which can be done via waiver. The role of TAPP is not to collect data, but to evaluate the studies for the community.

According to budget history, each study costs approximately \$6,000. After some discussion, the following projects were prioritized:

- 1.) The Agency for Toxic Substances and Disease Registry (ATSDR) Air Emission Study
- 2.) Zone 2 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI)
- 3.) The Zone 2/3 Corrective Measures Survey (CMS) study

There was a question as to whether the Statement of Work (SOW) would constrain progress, but it was explained that the SOW is an integral part of funding and monitoring the work.

Administrative Wrap-Up

Agenda items for the next TRS meeting on December 10, 2002 were solicited.

Agenda for the October and November 2002 RAB is being drafted.

The participants were reminded that a draft application for appointment to RAB was in the meeting folder. On January 13 and 14, 2003 there will be oral applications at the RAB meeting.

Carol Costello September 17, 2002

**Junta Asesora de Restauración de Kelly (RAB, por sus siglas en inglés)
Subcomité de Revisión Técnica (TRS, por sus siglas en inglés)
10 de septiembre de 2002**

Asistentes:

Agencia de Conversión de Bases de la Fuerza Aérea (AFBCA, por sus siglas en inglés):

Sr. William Ryan

Booz Allen Hamilton (Booz Allen):

Srta. Best, Christine

Srta. Costello, Carol

Sr. Courtney, Scott

Sr. Davis, Ron

Sr. Martínez, E.

CH2Mhill:

Sr. Clary, Jim

Clearwater Revival Company:

Sr. Lynch, Patrick

Community:

Sr. Galvan, Ben

Sr. García, Rodrigo

Dr. Lene, Gene

Sr. Montoya, Joe

Sr. Murrah, Sam

Sr. Perez, Nazarite

Sr. Quintanilla, Armando

Sr. Silvas, Robert

Agencia de Protección Ambiental (EPA, por sus siglas en inglés)

Sr. Miller, Gary

Departamento Metropolitano de Salud de San Antonio (SAMHD, por sus siglas en inglés):

Srta. Cunningham, Kyle

Srta. Hernández, Blanca

Srta. Kaufman, Linda

Srta. Deborah Martínez

Smith and Associates

Dr. Smith, David

**Comisión para la Conservación de los Recursos Naturales de Texas
(TNRCC, por sus siglas en inglés)**

Srta. Power, Abbi
Sr. Weegar, Mark

BORRADOR Minutas del TRS de Kelly del 10 de septiembre de 2002

Introducción

Se proporcionó a los asistentes el material con los antecedentes. Este paquete consistió de la agenda para la junta de la noche (Anexo 1), las minutas de la junta del TRS del 13 de agosto del 2002 y de la junta del Equipo de Limpieza del BRAC (BCT, por sus siglas en inglés), una presentación de la revisión del Programa de Asistencia Técnica para la Participación Pública (TAPP, por sus siglas en inglés) y una solicitud en borrador para la membresía en el RAB.

Revisión de la Unidad de Manejo de Desperdicios Sólidos (SWMU por sus siglas en inglés)

Se cubrió la condición actual de las medidas correctivas que está tomando la Fuerza Aérea en el área de los antiguos edificios 258, 259 y 259A (Anexo 2). Éste es el centro del área del líquido en fase densa no acuosa (DNAPL, por sus siglas en inglés).

Se han construido paredes de lechada de 300' de largo en forma cuadrada para contener el DNAPL. También, se ha instalado un sistema de bombeo y tratamiento de agua subterránea en los límites del sitio. Se han tomado medidas del agua subterránea en ambos lados de la pared. Además de DNAPL, se encontró arsénico tanto en el interior como en el exterior de la pared. Sin embargo, la concentración fue menor que el nivel de contaminante máximo (MCL, por sus siglas en inglés) permitido por los estándares federales para el agua potable. Hay algo de fuga de DNAPL desde el exterior de la pared al interior del área contenida debido a la presión diferencial. Para mejorar el monitoreo a largo plazo, se sugirió la construcción de pares de pozos.

Se concluyó que las actividades de la Fuerza Aérea han sido las apropiadas para favorecer la recuperación del área.

Las preguntas de los miembros del Comité incluyeron las siguientes:

P. ¿Cuál es la profundidad de la pared de lechada?

R. Tiene 40-46' de profundidad, llegando hacia el nivel de arcilla de Navarro.

P. ¿Está diseñada la pared para que tenga fugas?

R. No, pero de hecho, la fuga es beneficiosa, pues el DNAPL en el área fuera de la pared lixivia hacia el área separada por la pared y da por resultado una

restauración más rápida. En el futuro, habrá un monitoreo mejorado de la fuga alrededor de la pared.

P. ¿Dónde están los pozos actuales alrededor de las paredes de lechada?

R. El Sr. Lynch proporcionó un diagrama.

P. ¿Cuál es el plazo para la recuperación del área?

A. En el área al este de la pluma, se estima que en 9 años la recuperación estará completa. En el área del edificio 258, suponiendo que 1,000 galones de DNAPL se emitan por año, y que la tasa disminuya en el futuro debido a disminuciones en presión, la recuperación requerirá más de 16 años.

P. ¿Cuál es el efecto de la cantidad excesiva de lluvia sobre la recuperación?

R. La lluvia básicamente tiene un efecto negativo, al llenar y diluir el interior de la pared de lechada, aumenta simultáneamente la presión dentro de la pared. Como resultado, ocurre menor movimiento hacia adentro del DNAPL desde afuera de la pared.

P. ¿Pueden los olores fétidos en el área estar relacionados con la evaporación del DNAPL de esta área?

A. Sin mayores detalles, esto es difícil de responder, pero parece improbable una relación causa y efecto. El área en cuestión está ahora cubierta por un estacionamiento.

P. ¿Hay más detalles además del reporte provisional actual de Clearwater? (Anexo 3)

R. Las preguntas específicas deben dirigirse por escrito y serán respondidas. El reporte final se deberá presentar a la RAB en su junta en noviembre del 2002.

P. ¿La construcción propuesta de la Avenida Kelly pondrá en peligro las áreas donde existe la pluma en la capa de agua subterránea?

R. Ésta es un área importante para investigación posterior. Los estudios y mapas del suelo estarán disponibles para un examen posterior.

Proceso de Asistencia Técnica para la Participación Pública (TAPP por sus siglas en inglés)

Se volvió a plantear la función de Booz Allen para actuar como un solo punto de contacto entre los diversos grupos.

Se revisó la estructura para la identificación de proyectos y obtención de fondos (Anexo A). Actualmente hay un excedente presupuestal de \$22,278.50 dólares que puede emplearse en proyectos de interés para el grupo. Hubo cierta preocupación sobre el aprovisionamiento de fondos para el futuro, que puede hacerse a través de renuncia de derechos. El papel del TAPP no es recopilar información, sino evaluar los estudios para la comunidad.

De acuerdo al historial presupuestario, cada estudio cuesta aproximadamente 6,000 dólares. Después de alguna discusión, se dio prioridad a los siguientes proyectos:

- 1) El Reporte de Emisiones de Aire de la Agencia para el Registro de Sustancias Tóxicas y Enfermedades (ATSDR por sus siglas en inglés).
- 2) Investigación de Instalaciones (RFI, por sus siglas en inglés) de la Ley de Conservación y Recuperación de Recursos de la Zona 2 (RCRA, por sus siglas en inglés).
- 3) Estudio de Medidas Correctivas (CMS por sus siglas en inglés) de las Zonas 2 y 3.

Hubo una pregunta de si la Declaración de Trabajo (SOW por sus siglas en inglés) restringiría el avance, pero se explicó que el SOW es una parte integral de la obtención de fondos y vigilancia del trabajo.

Conclusiones Administrativas

Se solicitaron puntos para la agenda de la próxima junta del TRS del 10 de diciembre de 2002.

Se está trabajando en el borrador de la agenda para el RAB de octubre y noviembre de 2002.

Se recordó a los participantes que en la carpeta de la junta estaba una solicitud en borrador para nombramientos en el RAB. El 13 y 14 de enero del 2003 habrá solicitudes orales en la junta del RAB.

Carol Costello 17 de septiembre de 2002

**Kelly Restoration Advisory Board (RAB)
Technical Review Subcommittee (TRS)
August 13, 2002**

Attendees:

Mr. Rick Rogus, CH2MHill
Mr. Mark Stoker, CH2MHill
Mr. Mark Hemingway, CH2MHill
Ms. Blanca Hernandez, San Antonio Metropolitan Health Department (SAMHD)
Ms. Kyle Cunningham, SAMHD
Ms. Deborah Martinez, SAMHD
Ms. Nicole Rodgers, SAMHD
Dr. David Smith, Smith & Associates
Mr. William Ryan, Air Force Base Conversion Agency (AFBCA)
Mr. Don Buelter, ABFCA
Ms. Vanessa Musgrave, AFBCA
Mr. Walter Peck, AFBCA
Mr. Mark Weegar, Texas Natural Resource Conservation Commission (TNRCC)
Ms. Reegan Errera, TNRCC
Mr. Robert Silvas, RAB Community Member
Mr. Paul Person, RAB Community Member
Mr. Hector Morales, Congressman Ciro Rodriguez Special Projects Director
Mr. Gary Martin, Greater Kelly Development Authority (GKDA)
Ms. Bernadette Pena, Community Member
Mr. Eddie Martinez, Booz Allen Hamilton (Booz Allen)
Mr. Hugh Farr, Booz Allen
Mr. Scott Courtney, Booz Allen

Meeting began at 6:39 PM.

Dr. Smith began the meeting by reviewing the agenda for the meeting. Mr. Paul Person asked how many other RAB community members were present at the meeting. After a moment, it became clear that he was the only RAB community member present. The lack of RAB members present meant that the RAB and TRS meeting minutes could not be approved or voted down. He asked that the minutes reflect that he, Mr. Paul Person, was in fact the only RAB member present and that as such, he would be the acting co-chair for the evening. Mr. Robert Silvas, RAB community member, joined the meeting later.

Technical Review of Zone 4 & 5 Corrective Measures Study (CMS) Mr. Mark Hemingway

Mr. Hemingway began by outlining the areas his presentation would cover. He said that if there were any questions, he would be happy to take them at any time during his discussion. He also asked the audience if they understood the regulatory nature of the

Resource Conservation and Recovery Act (RCRA). After a brief pause, Mr. Person turned and asked the audience if anyone did not understand the RCRA process. No one responded, and the presentation continued.

Mr. Hemingway explained that Geomatrix's review consisted of an evaluation of objectives, processes, and conclusions of the Zone 4 and 5 CMS reports in terms of technical validity, regulatory appropriateness and community acceptance. He added that the Geomatrix review did not include confirmation of supporting data, validation of groundwater modeling or a detailed review of cost estimation spreadsheets. Mr. Hemingway discussed the Zone 4 off-base plumes and the CMS recommended remedies as pumping wells, permeable reactive barriers (PRBs) and phytoremediation.

Mr. Silvas asked why the decision was made not to plant poplar trees as part of the phytoremediation cleanup effort. Mr. Hemingway responded saying that the planting of poplar trees, it had been determined would have taken longer and would not have enhanced the cleanup process. Mr. Person also stated that the time it would have taken would have been too long to add any value to the cleanup process.

Mr. Hemingway addressed the Zone 5 CMS portion of his review concluding that the AFBCA's proposed plans would further reduce off-base contaminant migration and restore on and off-base groundwater to Texas standards in a realistic timeframe.

Mr. Hemingway also stated that the remedies proposed by the AFBCA were generally sound and appropriate. He added that the combination of innovative and conventional methods indicated that plume removal within five years was a reasonable timetable. Mr. Hemingway also stated that the most important work will be the design and monitoring of the remedies so that if in fact modifications need to be made, they can be.

TAPP Process presentation – Mr. Eddie Martinez

Mr. Martinez had intended to present the TRS with information on the TAPP process and the project selection process, but due to insufficient number of RAB community members actually present, the project selection process was not covered. This item will be added to the forthcoming TRS meeting agenda scheduled for September 10, 2002.

Administrative

Dr. Smith noted that since only two RAB members were present they could not vote on the acceptance or rejection of the minutes that had been included in the TRS meeting packets. He also suggested that items such as BCT updates, Spill Reports and other documents relevant to the TRS be moved onto the September TRS meeting agenda. Dr. Smith then asked if the members of the audience would move to adjourn the meeting. Mr. Person moved to adjourn, and Mr. Silvas seconded the motion and the meeting closed.

The meeting ended at 7:20 PM.

**Kelly Restoration Advisory Board (RAB)
Technical Review Subcommittee (TRS)
August 13, 2002**

Attendees:

Mr. Rick Rogus, CH2MHill
Mr. Mark Stoker, CH2MHill
Mr. Mark Hemingway, CH2MHill
Ms. Blanca Hernandez, San Antonio Metropolitan Health Department (SAMHD)
Ms. Kyle Cunningham, SAMHD
Ms. Deborah Martinez, SAMHD
Ms. Nicole Rodgers, SAMHD
Dr. David Smith, Smith & Associates
Mr. William Ryan, Air Force Base Conversion Agency (AFBCA)
Mr. Don Buelter, ABFCA
Ms. Vanessa Musgrave, AFBCA
Mr. Walter Peck, AFBCA
Mr. Mark Weegar, Texas Natural Resource Conservation Commission (TNRCC)
Ms. Reagan Errera, TNRCC
Mr. Robert Silvas, RAB Community Member
Mr. Paul Person, RAB Community Member
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Mr. Hemingway outlined the areas his presentation would cover. He said he would be happy to take them at any time during his discussion. He also asked if the audience understood the regulatory nature of the Resource Conservation and Recovery Act

(RCRA). After a pause, Mr. Person turned and asked the audience if anyone did not understand the RCRA process. No one responded, and the presentation continued.

Mr. Hemingway explained that Geomatrix's review consisted of an evaluation of objectives, processes, and conclusions of the Zone 4 and 5 CMS reports in terms of technical validity, regulatory appropriateness and community acceptance. He added that the Geomatrix review did not include confirmation of supporting data, validation of groundwater modeling or a detailed review of cost estimation spreadsheets. Mr. Hemingway discussed the Zone 4 off-base plumes and the CMS recommended remedies as pumping wells, permeable reactive barriers (PRBs) and phytoremediation.

Mr. Scott Courtney took exception to the inclusion of phytoremediation in the preferred alternatives portion of the CMS. Mr. Silvas asked why the decision was made not to plant poplar trees as part of the phytoremediation cleanup effort. Mr. Hemingway stated that planting poplar trees required more time to truly be effective and therefore would not have enhanced the cleanup process. Mr. Person added that the time necessary would have been too long to add any value to the cleanup process.

Mr. Hemingway addressed the Zone 5 CMS portion of his review concluding that the AFBCA's proposed plans would further reduce off-base contaminant migration and restore on and off-base groundwater to Texas standards in a realistic timeframe.

Mr. Hemingway also stated that the remedies proposed by the AFBCA were generally sound and appropriate. He added that the combination of innovative and conventional methods indicated that significant plume removal within five years was a reasonable timetable. Mr. Hemingway also stated that the most important work will be the design and monitoring of the remedies so that if in fact modifications need to be made, they can be.

TAPP Process presentation – Mr. Eddie Martinez

Mr. Martinez had intended to present the TRS with information on the TAPP process and the project selection process, but due to insufficient number of RAB community members actually present, the project selection process was not covered. He said the item would be added to the September 10, 2002 TRS meeting agenda.

Administrative

Dr. Smith noted that with only two RAB members present, voting on the acceptance or rejection of meeting minutes included in the TRS meeting packets could not take place. He suggested that items such as BCT updates, Spill Reports and other documents relevant to the TRS be moved onto the September TRS meeting agenda. Dr. Smith asked if the members of the audience would move to adjourn the meeting. Mr. Person moved to adjourn, and Mr. Silvas seconded the motion.

The meeting ended at 7:20 PM.

Item #	Lead	Support	Discussion Topic	Comments	How will we know it's done?	Disposition
4.	Glass, J.	CH2M Hill	CE Asphalt Yard	Approach to closure of CE Yard and its evaluation	Team receives information.	Closed. Presentation was provided as to the current status of the yard. Sites associated with the yard are being closed at RRS 2. Some resampling for SPLP will need to be performed. There is already a good sampling distribution. A resample should provide the current status of SPLP. Will reevaluate TPH value using current standards and testing.
5.	Buelter, D.		Sanitary Sewer	Discuss sanitary sewer evaluation technical memo sent to the regulators in July	Team receives information.	Closed. Evaluation document sent to regulators. Summary of the information was provided to the BCT. Phase I release assessment is suggested. Also, a proposal to sample the soil around the outside of 9 facilities.
6.	Buelter, D.		S-9 & response to comments	Present how AFBCA is addressing TNRCC comments to report.	Team receives information.	Closed. AFBCA is addressing the comments provided by EPA. AFBCA will break out areas and include data associated with the areas. RFI will be resubmitted by the end of September. Response to comments will be provided in the RFI.
7.	Shipman, J.	Earthtech	Kelly Radium Paint Shop	Kelly Radium Paint Shop Clean Up levels, EPA concurrence of TAC 25, Ch 289.202 levels	Team receives information.	Closed. Earthtech discussed their desire to use Texas Regulations (TAC) for remediation in B324. Cleanup will be to 2500 dpm/100cm ² . Information was provided to EPA. EPA will take this information back to HQ and provide to EPA's risk assessor for concurrence.
8.	Ryan, W.	Buelter, D. Peck, W.	Zone Updates	Provide team with update of current activities in Zones 2, 3, 4 and 5	Team receives updates.	Closed. Zone updates were provided by the Zone managers.
9.	Ryan, W.	Weegar, M. Miller, G.	List of Future Deliverables (Regulators/RAB)	Each month, provide a list of upcoming documents for review	Team receives list of upcoming documents for review.	Closed. List was provided to the regulators.
10.	Ryan, W.	BCT Members	Begin September Agenda	Each month, begin to establish the next month's agenda at the end of the BCT meeting	Team approves agenda items.	Closed. No items discussed at this meeting. The BCT will discuss prior to the September meeting to determine if there are enough agenda items to warrant a meeting.
11.	Ryan, W.	Weston Solutions	Zone 5 PRB Tour	Field trip to Zone 5 PRB project	Team visits project site	Closed. BCT members were provided a tour of the Zone 5 PRB activities by Weston personnel.

Technical Assistance for Public
Participation (TAPP) Process



Presented to the
Restoration Advisory Board
10 September 2002

Overview

- Identification of Need
- Application Process
- Commander Decision
- Procurement

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Identification of Need

- Identify proposed projects
- Decide on best type of assistance
 - local universities
 - community experts
 - state and local health and environmental organizations
- If none of the above are suitable, then community members may seek TAPP Assistance

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Application Process

- Community must identify a single point of contact for communication with DoD
- Community completes application w/assistance from DoD RAB co-chair
- Describe the project and desired product
- If possible, suggest potential providers

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Commander Decision

- Installation Commander (IC) or the equivalent Decision Authority;
 - determines conformity to eligibility requirements
 - affirms community has sought other avenues
 - determines availability of funding

⋮

Procurement

- Contracting officer, Mr. Keith Matowitz, will procure assistance for community members
- Currently available: \$22,278.50

CLEARWATER REVIVAL COMPANY

98-3037-02

August 26, 2002

Grace Fernandez
311 HSW/PKVCA
3207 Sidney Brooks
Brooks AFB, TX 78253-5344

305 Spruce Street
Alameda, CA 94501

(510) 522-2165

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Transmittal

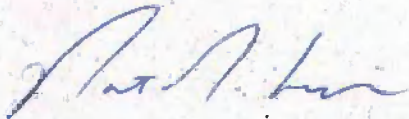
Draft Technical Review Report
Kelly Air Force Base TAPP Grant

Dear Ms. Fernandez:

Enclosed please find twenty copies of Clearwater Revival Company's Draft Technical Review Report of the RCRA Facility Investigation, Former Building 258 Solid Waste Management Unit, for Kelly Air Force Base (Contract No. F41622-98-A5882, Call Order 0001).

If you have any questions on this information please contact me at (510) 522-2165 or clearwater@toxicspot.com.

Sincerely,



Patrick G. Lynch, P.E.
Civil/Chemical Engineer

Enclosure



Draft Technical Review Report

Building 258 RCRA Facility Investigation
Kelly Air Force Base
San Antonio, Texas

Prepared by:
Patrick G. Lynch, P.E.
Clearwater Revival Company¹

On behalf of the Kelly Air Force Base (AFB) Restoration Advisory Board (RAB), Clearwater Revival Company (CRC) has performed an independent technical review of the following document:

2002, Science Application International Corporation, "RCRA Facility Investigation, Former Building 258 Solid Waste Management Unit, Kelly AFB, Texas, Final" prepared for Kelly Air Force Base, January.

CRC has assessed the RCRA Facility Investigation's (RFI's) completeness, and the adequacy of the Air Force's proposed or current actions.

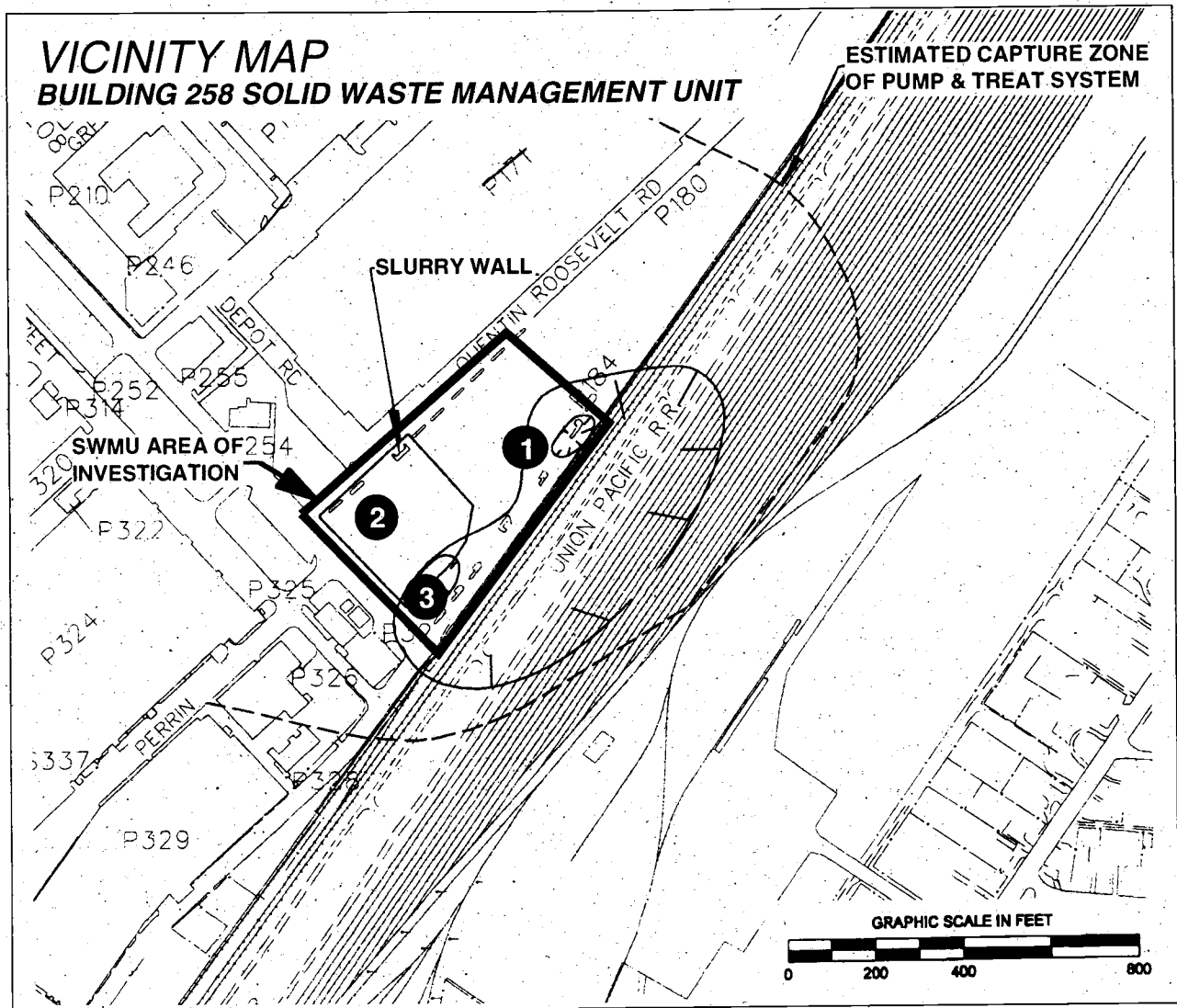
The Air Force's current actions at the Building 258 Solid Waste Management Unit (SWMU) include two interim stabilization measures: (1) Installation of a slurry wall around the former building footprints; and, (2) operation of a groundwater pump and treat system at the site boundary. The actions proposed by the RFI include the preparation of a corrective measures study to evaluate cleanup alternatives for separate phase liquids (DNAPLs), and soil contamination.

CRC's review indicates that current and proposed actions by the Air Force at the Building 258 SWMU are appropriate. CRC's confidence with the success of these current and proposed actions would be increased if a better monitoring program for slurry wall performance was implemented, and the characterization of the extent of soil contamination was improved.

CRC has presented a brief description of the Building 258 SWMU followed by sections presenting our analyses and comments on the following:

- Air Force's Ongoing Actions for Former Building 258 SWMU
- Air Force's Recommended Actions for Former Building 258 SWMU
- Extent of Chlorinated Solvent Contamination
- Extent of Metal Contamination
- Quality of RFI Report

¹ Author contact information: Clearwater Revival Company, 305 Spruce Street, Alameda, CA 94501, email: clearwater@toxicspot.com



Site Background

The Building 258 SWMU, referred to as Site MP and Site OT-2 in the past, is a significant contributor to the off-base groundwater contaminant plume. The SWMU consists of former Building 258 and former Building 259 and an adjacent area that contained underground storage tanks. Building 258 and Building 259 were used as plating facilities. The buildings were demolished in the early 1980s and the area has been used for a parking lot since that time.

Areas to be addressed in future Corrective Measures Study:

- 1** High levels of several metals are found in soils together with chlorinated solvents and benzene.
- 2** A pool of liquid PCE, a dense non-aqueous phase liquid (DNAPL) is found on the surface of the Navarro Clay 40 feet below the ground surface. The RFI estimates this liquid pool contains 16,000 gallons. An estimated 2,000 gallons of DNAPL were recovered during 1998-99. This DNAPL pool, and significant soil contamination are located within the slurry wall boundaries.
- 3** High concentrations of solvents in soil gas and subsurface soils are found outside the slurry wall in this area.

Air Force's Ongoing Actions for Former Building 258 SWMU

Two interim stabilization measures have been initiated at Building 258 SWMU: the installation of a slurry wall around the former building footprints, and the operation of a groundwater pump and treat system at the base boundary.

An evaluation of the slurry wall's effectiveness was provided in the RFI Report. The effectiveness evaluation indicated that some leakage is occurring through the slurry wall. This evaluation was conducted by continuously measuring groundwater levels in a well inside and two wells outside the slurry wall. This evaluation did not enable an estimate of the slurry wall permeability to be made.

Slurry wall permeability estimates can be obtained from appropriately located groundwater monitoring well pairs (one well inside and one well outside the slurry wall). Given the long-term nature of the cleanup project, installation of monitoring well pairs should be considered as a part of an effective cleanup monitoring program.

Air Force's Recommended Actions for Former Building 258 SWMU

The RFI Report has proposed that a Corrective Measures Study be prepared to address DNAPLs, and soil contamination from perchloroethylene (PCE), trichloroethylene (TCE), 1,1,2-trichloroethane, and arsenic. These contaminants were identified through risk screening using the 1993 Texas Risk Reduction Rule.

While CRC concurs with the Air Force's recommendation, our risk screening analysis indicates that, in addition, the Corrective Measures Study should also address soil contamination by antimony, beryllium, benzene, lead, thallium, selenium, and silver. CRC's risk screening concluded the following:

Historical Summary Detections for Subsurface Soils (TABLE 5-2, RFI Report) incorrectly omitted beryllium. Appendix C indicates beryllium was detected in 20 of 27 soil samples, including six sample results that exceeded the risk screening criteria.

SPLP Metals Concentrations in RFI Soil Samples (Table 5-5, RFI Report) indicates that the detection limits for the Synthetic Precipitation Leaching Procedure Test ranged from 0.05 to 0.10 mg/L. This detection limit is above the risk screening criteria (MCLs) for arsenic (0.01 mg/L), lead (0.015 mg/L) and thallium (0.002 mg/L). The SPLP Test, EPA Method 1312 can achieve lower limits of detection than those reported in the RFI. Since the results of sampling do not demonstrate that levels of antimony, lead and thallium are below risk screening values, they should be considered subsurface soil contaminants.

Risk Based Screening (Table 5-9, RFI Report) incorrectly states that Antimony, Selenium and Silver passed SPLP test when the SPLP test was not analyzed for all samples in which these metals were found at high concentrations. Since the results of sampling do not demonstrate that concentrations of selenium and silver in soil are below risk screening values, these metals should be considered subsurface soil contaminants

Risk Based Screening (Table 5-9, RFI Report) incorrectly presents the maximum concentration of benzene as 200 µg/kg when the value reported in Table 5-4 and Appendix C is 840 µg/kg, which exceeds the 500 µg/kg screening criteria.

Extent of Chlorinated Solvent Contamination in Subsurface Soils

The extent of chlorinated solvent contamination in subsurface soils was determined by comparing the results of soil samples to the soil risk screening criteria for protection of groundwater. PCE, TCE, and 1,1,2-TCA were identified as contaminants. In addition to protection of groundwater, the 1993 Texas Risk Reduction Rule includes an additional risk screening criteria for soils. This criterion requires that the total volatile organics concentration in soil gas be less than 1,000 parts-per-million. This screening criterion was not considered in determining the extent of soil contamination by solvents.

Application of the screening criteria for the total volatile organics in soil gas would increase the area of soil contamination shown in Figure 5-8 of the RFI. In addition, the limits of soil gas contamination are not known in the area southeast of former Building 258. The high soil gas concentrations found in this area are similar to the concentrations measured in areas where DNAPL are found.

The RFI report provides site plans showing the areas where high levels of solvents were found. However, the RFI does not provide any analysis on the depths of contamination. The final report should include a discussion or figures showing the depths of contamination.

Extent of Metal Contamination in Subsurface Soils

The draft RFI Report does not contain adequate information to enable an estimate of the volume of soil that is contaminated by metals. This estimate would be necessary to evaluate different cleanup alternatives in the Corrective Measures Study.

The RFI report does not include a figure depicting the extent of arsenic contamination. One of the sample locations used to determine the extent of arsenic contamination is not shown on any RFI report figures.

In addition, other metal contaminants have been identified. Most of these contaminants are found at the same locations as high concentrations of arsenic. Some metal contamination is found in other areas of the SWMU. The final report

should include a discussion or figures showing the location and depths of each area of metal contamination. The RFI Report should provide sufficient detail to estimate the costs of different cleanup alternative in the Corrective Measures Study.

The RFI Report states that only chlorinated solvents have impacted groundwater. Results of metal analyses on groundwater samples were not provided in the RFI Report to support this statement. This information should be included in the final RFI Report.

Overall Quality of RFI Report

The RFI Report contains a number of errors and omissions that made the review of the report difficult. An example of these errors include:

The Executive Summary of the RFI Report identifies cis-1,2-dichloroethylene as a contaminant, but the RFI Report does not.

Building 258 SWMU Reference Map (Figure 5-1) does not include a scale, nor the locations of all samples referenced in the RFI Report.

The legend of Figure 2-3, Vertical Distribution of Total PCE, TCE, DCE and VC in Soil Vapor Samples Collected at Increasing Depth, contains errors concerning sample depth intervals.

Different arsenic concentrations for soil boring SB270, 2 to 4 feet deep, are reported in Table 5-6 of RFI Report (14.6 mg/kg) and Appendix C (161 mg/kg).

Appendix B is missing Attachment 2, the Soil Testing Engineers Inc. report.

Appendix C, Historical Soil Analytical Results, incorrectly lists dibromofluoromethane as a contaminant in soil samples from borings SS040SB273 to SS040SB277. Dibromofluoromethane is used as a laboratory marker in the analysis of soil samples.

Appendix D contained only two boring logs. An additional 24 borings were performed as part of scope of the RFI.

Appendix E does not contain analytical reports for all soil samples conducted during the RFI.

Several borings were conducted with the objective of investigating a low spot in the Navarro and confirming the results of previous seismic studies. Whether these objectives were achieved is never discussed.

The RFI Report should be adequately reviewed to eliminate these types of errors in the final document.

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Technical Assistance for Public Participation (TAPP) Process



Presented to the
Restoration Advisory Board
10 September 2002

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Overview

- Identification of Need
 - Application Process
 - Commander Decision
 - Procurement
-

Class 3 Modifi

CMT for site S-4
✓ Zone 4 CMT workshop mid 03
✓ Zone 5 CMT up
Zone 2 CMT > 1 early 03
Zone 3 CMT

✓ AT&DR Air Emission
✓ Zone 2 RFI ①

Identification of Need

- Identify proposed projects
- Decide on best type of assistance
 - local universities
 - community experts
 - state and local health and environmental organizations
- If none of the above are suitable, then community members may seek TAPP Assistance

Dr. Lane

Application Process

- Community must identify a single point of contact for communication with DoD
- Community completes application w/assistance from DoD RAB co-chair
- Describe the project and desired product
- If possible, suggest potential providers

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Commander Decision

- Installation Commander (IC) or the equivalent Decision Authority;
 - determines conformity to eligibility requirements
 - affirms community has sought other avenues
 - determines availability of funding

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Procurement

- Contracting officer, Mr. Keith Matowitz, will procure assistance for community members
- Currently available: \$22,278.50

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REPORTS FOR THE ST. MARY'S LIBRARY

	REPORTS LISTED BELOW WERE TAKEN TO THE TRS MEETING	Date	Status	ADM
	August 13, 2002			
322B	Class 3 Modification to Compliance Plan CP-50310 Former KAFB Site S-4 CMI Work Plan	April 2002	Final Draft	Inf
	Insertion Pages being submitted			
468	Corrective Measures Study for Zone 4	March 2002	Final Draft	Inf
	Correction Pages were Certified Mailed to Dr. Lene on 1 Aug 02			
649B	Semiannual Compliance Plan Report for Jul 2002 (Jan-Jun 02) for RCRA-Reg Units & LC	July 2002	Final	Inf
808A	Closure Report for Building 1418, Lift Station	June 2002	Final	Inf
809A	Closure Report for Building 1418, Oil Water Separator	June 2002	Final	Inf
	Date: 8-13-02			
	Signature: Paul K. De... <i>Paul K. De...</i>			

DRAFT

APPLICATION FOR APPOINTMENT
TO THE
RESTORATION ADVISORY BOARD
FOR THE FORMER KELLY AFB

I. BASIC INFORMATION:

- A. Name:
 B. Address:
 C. City, State, Zip Code:
 D. Home Phone #:
 E. Work Phone #:
 F. Home Fax # or E-mail Address (optional):
 G. Work Fax # or E-mail Address (optional):
 H. Place of Employment (optional): Name _____
 Address _____
 City, ST, Zip Code _____

II. BASIC QUESTIONNAIRE:

- A. Have you ever worked at Kelly AFB? ___ Yes ___ No
 If yes, please explain where and for how long?

- B. Attached to this application is a map, which shows the limits of contamination.
 Please put an "X", in ink, which shows approximately where you live in this area, or
 if your place of employment is within this area.

III. SPECIFIC QUESTIONS:

- A. Will you have the time to attend necessary meetings, seminars, briefing and training
 sessions during daytime hours, if necessary (note: most meetings are after 6:00
 p.m.)? ___ Yes ___ No
 If no, please explain why not: _____

- B. Finally, please provide your specific comments to the board, detailing your
 commitment and dedication to being a functional part of the Kelly Restoration
 Advisory Board and your specific proposals to make this board more effective
 in its work.

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE