



KELLY AFB
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 3353

Agenda
Restoration Advisory Board Meeting
Jan. 30, 1995

Location: San Antonio Fire Training Academy
4531 S. Zarzamora

- | | | |
|-----------|---------------|--|
| 6 p.m. | Co-chairs | Welcome/Opening Remarks from co-chairs |
| 6:10-6:20 | Co-chairs | Changes to membership <ul style="list-style-type: none"> • Members absent two consecutive meetings • New membership applications |
| 6:20-6:40 | Victoria Wark | Public comment period, Site Groundwater Zone 3 <ul style="list-style-type: none"> • Opening, closing dates of public comment period • Date, time, location of public meeting • Review of Proposed Plan • Upcoming public comment period for Zones 1 and 2 proposed plans |
| 6:40-7:00 | | Members discuss/comment on Zone 3 proposed plan |
| 7:00-7:20 | Co-chairs | Discussion of open items from previous meetings <ul style="list-style-type: none"> • Minority contracting • Relative risk evaluations • Groundwater risk of capture • Potential for home foundation damage |
| 7:20-7:40 | | Open discussion, feedback from RAB members and public on all aspects of Installation Restoration Program |
| 7:40-7:45 | Co chairs | Date, time, location of next RAB meeting |

Documents provided to RAB members:

1. Final copy of Site Groundwater Zone 3 Proposed Plan
2. Fact sheet on Zone 3 Proposed Plan
3. Final copies of Site Groundwater Zones 1 and 2 Proposed Plans

**RESTORATION ADVISORY BOARD
MEETING MINUTES**

January 30, 1995

1. Restoration Advisory Board (RAB) held its monthly meeting on January 30, 1995 at the Fire Training Academy, 4531 S. Zanzamora. The meeting began at 6:00 p.m. and concluded at 8:45 p.m.

2. Members and alternates present:

Allan Hagelthorn	Richard Hirsch	Richard Trevino (Alt)
George Rice	Bill Sain	Desiderio Raygosa (Alt)
Tom Moore	Armando Quintanilla	Joan Falkenberg (Alt)
Billy Brown	Gene W. Lene'	Kelly McCartney (Alt)
Gary Beyer	Nick Rodriguez	Kirk Loftin (Alt)
Yolanda Johnson	Florencio Martinez	Raul Villar (Alt)

3. Members absent:

Larry Bailey (alternate present)	Jessie Bankston
Carl Mixon (alternate present)	Roy Gill
Charles Ayala (alternate present)	Leonel Benavidez
Sam Sanchez (alternate present)	Ricardo Jimenez
Kelly Thurlow	

4. Mr. Hagelthorn, community co-chair opened the meeting. After greeting the attendees and ensuring that no one objected to the base tape recording the meeting for the purpose of a transcript and accurate minutes, he addressed three areas.

a. He stated that the main topic for the evening would to determine what direction the RAB members and the community felt that the Restoration Advisory Board should be taking in the coming months, including what the board needs from the Air Force and what form cooperation should be taking.

b. He pointed out that the Air Force co-chair, Mr. Larry Bailey was out of town on temporary duty and would not be attending the meeting.

c. He asked the board's concurrence to table three pending RAB membership applications and other business involving membership until the Air Force co-chair could be present to participate in the discussion. (There was no dissent).

5. Mr. Trevino, KAFB alternate member, then advised the members that the agenda had been changed (i.e., from that previously given out at the RAB workshop) and that he had come to the meeting without his copy. However, he pointed out that the Air Force's goal for the evening was to listen and receive feedback on (1) the usefulness of the information presented so far about the Installation Restoration Program, the individual sites and the cleanup process, and (2) any areas or subjects which the RAB members would like to receive additional information about, and (3)

what form future informational or educational materials should take (briefings, printed fact sheets, question and answer session, etc.).

6. Mr. Trevino then handed out information sheets about treatability studies that have been carried out on Kelly AFB and the base's successful program to reduce use of substances on the U.S. EPA's list of 17 chemicals to be reduced or eliminated by the Year 2,000. He also passed out copies of the December 12, 1994 RAB minutes in English and Spanish. Extra copies of all items were made available to members of the public.
7. Mr. Trevino pointed out that the Public Hearing and Public Comment Period for the Proposed Plans and Feasibility Studies for the cleanup of the shallow underground water in Zones 1, 2, and 3 had been postponed. He predicted that the Public Hearing would occur in late February or during March. He again stressed the desire for RAB members to review the plans and the documents and provide comments for the Public Hearing.
8. Mr. George Rice, RAB member, again brought up his concern for the accuracy of proprietary groundwater flow modeling software used by Kelly's contractors. Mr. Trevino offered to set up a demonstration by the contractor for RAB members and the general public immediately prior to the Public Hearings on the groundwater studies and plans. Mr. Hagelthorn pointed out that before a groundwater modeling software program could be applied, it had to be tested to meet Environmental Protection Agency and Texas Natural Resources Conservation Commission standards for accuracy. Mr. Rice asserted that, unless he could have access to the embedded computer language code instructions, he could neither judge nor place reliance in the accuracy of the contractor's work. Mr. Trevino then pointed out that the program would have no relevance without the five years worth of sampling results and testing data that the contractor has loaded. but that this data is available to Mr. Rice in the Feasibility Study documents, if he wishes to load it into any program that he owns or has access to for purposes of verifying it. Captain Ed Van Dran volunteered that another contractor is using different modeling software to illustrate data from the all studies and sites through the Basewide Remedial Assessment and that this cross-check could be made available to Mr. Rice when the documents are complete. Mr. Trevino took the contractor demonstration for RAB members and the public (as a separate session or preceding the Public Hearing) as an action item.
9. Mr. Quintanilla expressed his displeasure that several items he had specifically requested for the agenda were not being addressed in the meeting. The issues were:
 - a. Information about the rights of capture for groundwater and who has the right to the water that is being drawn out by the recovery wells in the Quintana Road area.
 - b. Minority contracting.
 - c. Foundation damage to homes, allegedly caused by the recovery wells, and procedures for filing a claim against the Air Force for reimbursement for the cost of repairs.
10. Mr. Quintanilla then asked if anyone could address the fire that occurred the previous weekend at the Defense Reutilization and Marketing Office storage yard on East Kelly. Mr. Trevino shared what details he had, which were incomplete, but included the assurance that to the best of his knowledge none of the fire fighting water got into the shallow groundwater or went into Six Mile Creek. Mr. Quintanilla asked for a copy of the incident report on the fire and

Mr. Trevino agreed that this would be provided, either with the minutes or separately to Mr. Quintanilla and Mr. Bill Brown, RAB member, who also asked for it.

11. Mr. Hagelthorn suggested that it would be useful to have an attorney present the legal requirements of the IRP and CERCLA to the board and information about how residents could go about submitting claims if they feel their property has been adversely affected by the base.

12. Mr. Quintanilla then brought up his continued insistence that the Air Force provide the names of minority contractors and subcontractors within the environmental program. Mr. Quintanilla stated his understanding that \$98 million has been spent on environmental projects and his concern that the money should be spent with local businesses as much as possible. *(Recorder's note--This question has now been presented and answered as completely as possible in some form at every RAB gathering.)* Members contributed to a lengthy discussion that surfaced, but did not resolve, the issue's relationship to the responsibilities of the RAB or the board's willingness to spend further effort on the issue.

13. Mr. Trevino pointed out that the next RAB meeting would include another look at the Relative Risk Site Evaluations and the ratings given to the Kelly sites. The base needs the RAB's concurrence on the assignment of "high" and "medium" risk ratings to the individual sites. Mr. Trevino said that because only eight sites are considered "medium" risk, it should not be a difficult review process. A rank order within the categories is not needed and no rating greater than "high" exists.

14. Mr. Quintanilla reopened the issue of legal requirements and resident claims with the issue of buying or selling property and the question whether any special environmental documentation is required in areas impacted by Kelly Air Force Base. Mrs. Yolanda Johnson reminded the board of Mr. Dale Johnson's questions in the first RAB meeting about improving his land. Mr. Hagelthorn asked that this be added to the legal topics for a future presentation.

15. Mr. Raul Villar, alternate RAB member, asked about drums of soil being filled and removed from the S-1 area near his home on Barney Street. Mr. Trevino, Mr. Hagelthorn and Captain Van Dran contributed to an explanation of the process, i.e. that until soil is tested and shown to be clean, it must be treated as hazardous material with all precautions, safety equipment, and handling procedures. This was reinforced by Mr. Bill Brown, RAB member and TNRCC inspector.

16. In the course of the discussion of the soil drums, Mr. Hagelthorn called upon Mrs. Victoria Wark who provided the following information for the board's edification:

My name is Victoria Wark and I've been working on the radio frequency soil decontamination demonstration which is the technology that you were talking about. It was initially done out at that site, and we had two activities at the site. The first one was an activity that involved the Department of Energy and EPA and several different contractors trying to find a new way to decontaminate soil using radio frequency energy. And we had two different demonstrations of two different contractors out there so we could look at the results and compare the results. And EPA also looked at those results. Well, the technology worked out there maybe not as well as we want it to work, but it was only demonstrated on a very small plot of land - we're talking about 10 feet x 15 feet x 20 feet deep. So this was not anything that was meant to clean up that site. This was a demonstration to see if this technology could work later to clean up the entire site, basically. And we had input from lots of different people as far as funding this because we have to do treatability studies to see what works the best on the base to clean up the Kelly sites. As far as the overall cleanup of that site, Site S-1 is what we call it, next to

the fuel storage tanks -- Mike Patterson's the project manager on that project. What is being installed now is a groundwater containment project and interim remedial action. That is what we go out to do right away to clean up groundwater as soon as we know that there's a problem out there. So that was not associated with the soil. The radio frequency was a clean up test for just the soil. What you see going on right now - the wells that are being drilled - those are going to be groundwater extraction wells that'll pull the water out of the ground so it can be treated. So they're two entirely different projects. I just wanted to clear that up.

17. Ms. Wark's statement uncovered and answered an area of confusion about the two projects in the Growden Drive area.

a. The previous testing, which is now complete and which will not be resumed in that area, involved cleanup of some of the soil directly beneath the former storage yard.

b. The project to drill wells and install an interim treatment system is only for the shallow underground water. Wells along the base boundary will prevent further spread of contamination from the site by water moving slowly off base.

18. Mr. Richard Hirsch, RAB member, summarized the explanation with a comment that the studies appear to have identified the worst areas and the new system isolates them from the neighborhood, keeping the material on base until a final solution is decided upon. "In my mind, it stands to reason that you wouldn't put a barrier there if you didn't know," he said.

19. Because it has been many years since operations at the site ceased, Mrs. Johnson asked how much contamination remains at the site and how long the final cleanup will take. Mr. Trevino explained that the wells are an interim measure, done quickly to stop migration of contaminants from the base into the neighborhood. The normal process of study to determine how much contamination is in the soil and shallow underground water, where it is concentrated, and how best to clean it up is still underway. Until there's enough data to begin making sound scientific and engineering decisions, the site will continue to be studied. What the final solution will be or when it will be implemented are questions that cannot be realistically answered until more information is gathered.

20. Mr. Villar noted that the City of San Antonio is excavating for storm drainage in the area and asked if the site has any effect upon the work. Mr. Frank Vega, City of San Antonio engineer, explained that the drainage work is part of an areawide project that has been underway for some time. Excavation in the area is not to a depth that reaches the water table. Mr. Walters pointed out that there is no exposure to the shallow underground water for workers or residents because the ditches aren't that deep.

21. Mrs. Johnson asked the board to address health concerns that she has received from her neighbors in the area. Mr. Hagelthorn suggested that a presentation on this topic be scheduled for a future RAB meeting, after the legal topics are presented.

22. Mrs. Johnson relayed a report she had received that some type of contamination had spilled or leaked on base very near Winston Elementary School. Mr. Brown and Mr. Trevino expressed their desire to know the facts of the report so that it could be given further attention. Mrs. Johnson explained that the information had been relayed to her without identification of its source or any details about what was spilled, where or when. All RAB members were reminded that facts such as (1) the person involved, (2) what they saw, (3) when and (4) where are

necessary so that the staff can investigate possible incidents and determine what happened. Mr. Brown encouraged RAB members to have individuals contact him directly at the TNRCC to report suspected spills, leaks or incidents that may impact the school or neighborhood.

23. Mr. Hagelthorn then guided the RAB into administrative matters required before adjournment.

a. Minutes were approved.

b. March 6 at 6 p.m. was set as the date and time for the next meeting.

24. Mr. Trevino stressed the importance of members giving their proposed agenda items or discussion topics to the co-chairs early, as laid out in the RAB charter. This is essential because of the number and variety of topics being presented. It is the responsibility of the co-chairs to agree upon and distribute an agenda prior to the meeting so that members can be prepared.

25. Mr. Hagelthorn then opened the issue of which direction the members and the community would like the RAB to take in coming months.

a. Mr. Moore expressed his desire that the meeting be kept within its allotted time.

b. Mr. Quintanilla suggested that a format for the meetings be established to help regulate the discussion.

c. Several members expressed dissatisfaction with the meeting process as it developed and stated their desire to achieve more structure, focus and productivity for the time invested.

d. After further discussion the board arrived at a standard meeting format (attached).

26. Mr. Quintanilla suggested that the base and the RAB produce a newsletter on the environmental cleanup and mail it to those who now receive the base's Progress Reports. The idea was received positively by the members. Mr. Walters, representing Public Affairs, agreed to relay the idea to SA-ALC/EM and PA for consideration. Mr. Quintanilla also suggested that the newsletter be provided to the *Westside Sun*, the *Southside Reporter* and *La Prensa*.

27. Mrs. Johnson expressed displeasure that she had not received an adequate response to issues raised in a November meeting between base officials and the Committee for Environmental Justice -- Action. Mr. Hagelthorn agreed to look at her list of issues after the meeting and find out what is delaying a response.

28. The meeting was adjourned with the reminder that the next RAB will be March 6 at 6 p.m. and that the Relative Risk Site Evaluation ratings will be discussed to obtain the members' concurrence.

RICHARD TREVINO, Jr.
Chief, Environmental Restoration Operations Branch

New Format for Meeting

1. IRP/RAB "must do" issues involving current work, e.g. give Zone 3 comments, review Relative Risk Site Evaluations and approve them. (These are the issues for which the RAB was formed and represent Air Force work that cannot or should not proceed until the RAB has addressed them). (30 minutes)

2. Responses/Discussion of items taken for action at last RAB meeting. (20 minutes)

BREAK (10 minutes)

3. Presentation on an IRP topic of concern to RAB members, e.g. legal topics presentation, health risk and exposure. (30 minutes)

4. Open discussion: New business from RAB members, questions or comments from general public attendees. (30 minutes)

5. Goal: Close on schedule at two hours.

6. Goal: Minutes mailed within two weeks following meeting.

7. Goal: Co-chairs provide agenda for next meeting in time to be mailed with the minutes.

Staff Issues:

1. Getting the minutes done in a timely manner.

2. Getting the translation done early for mailing.

3. Recording the "promises" resulting from commitments made at meeting and staffing the responses.

**RESTORATION ADVISORY BOARD
MEETING MINUTES**

January 30, 1995

After review by all members and voice vote on 6 March 1995, minutes are:

APPROVED/DISAPPROVED

LAWRENCE O. BAILEY, Jr.
Kelly AFB Co-Chair

ALLAN HAGELTHORN
Community Co-Chair

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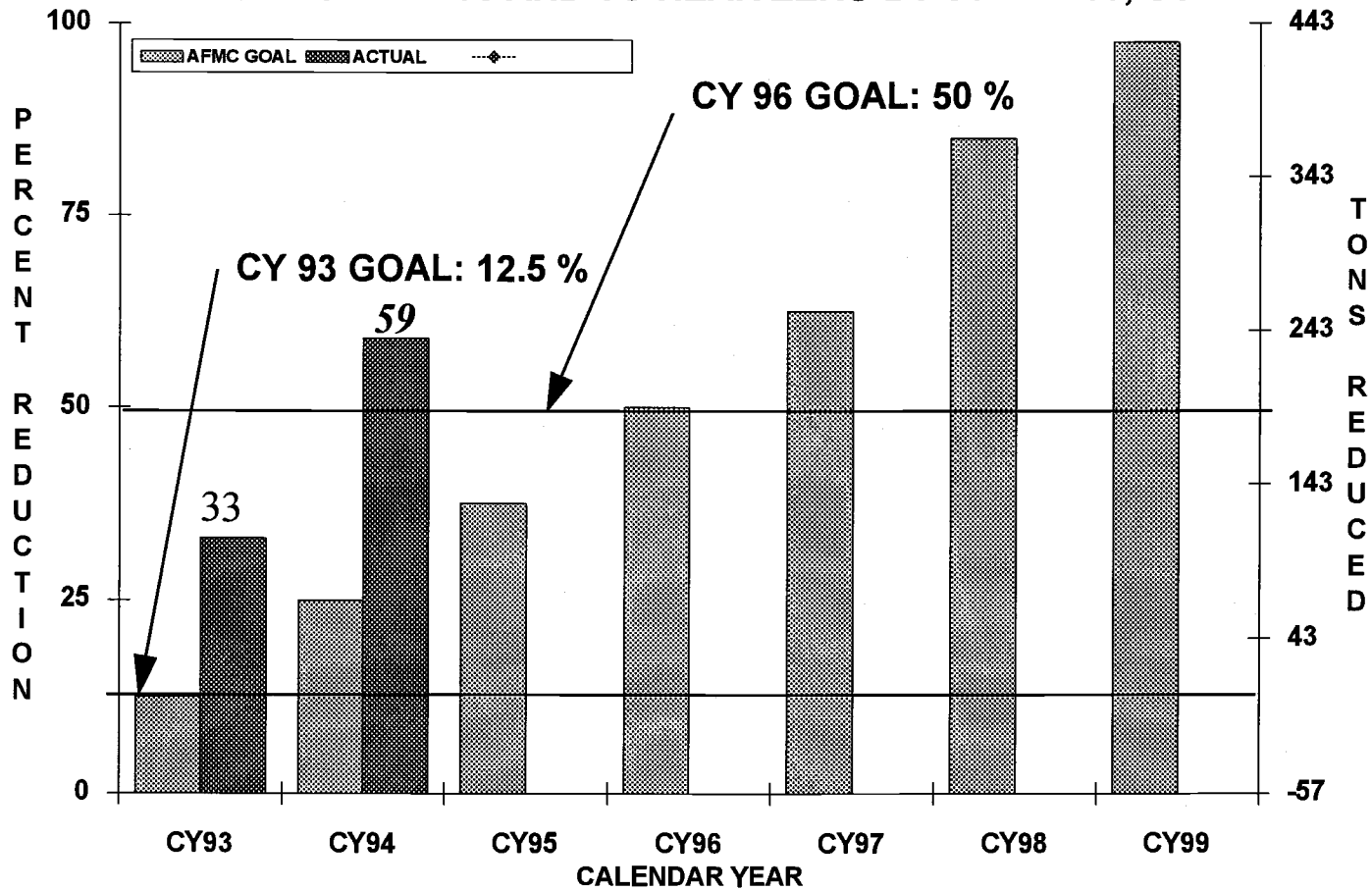
POLLUTION PREVENTION (EPA-17 INITIATIVE) FOR RESTORATION ADVISORY BOARD



JANUARY 30, 1995

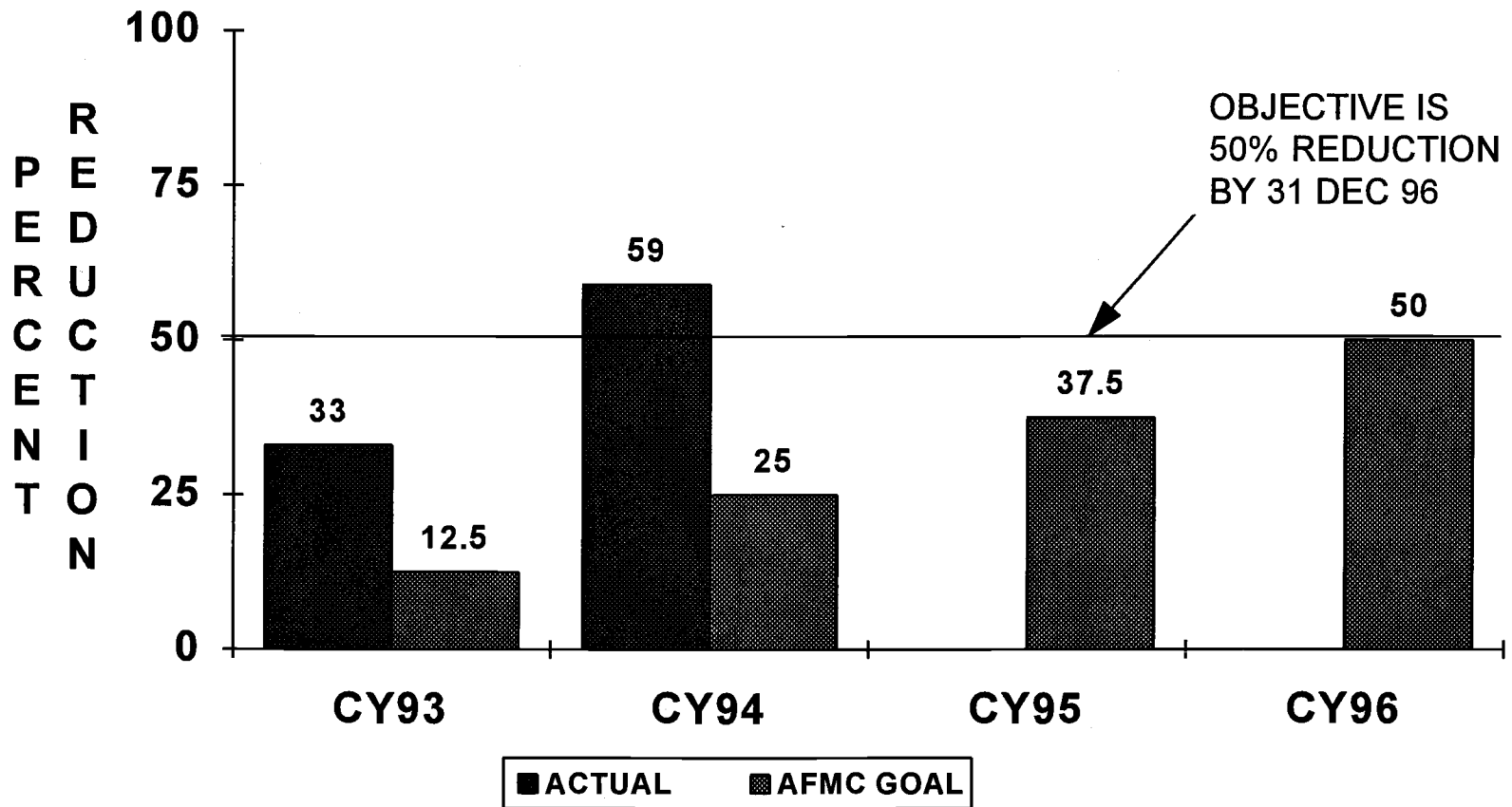
KELLY AFB EPA 17 REDUCTION IN PURCHASES CY REDUCTIONS

OBJECTIVE: REDUCE THE POUNDS PURCHASED OF EPA 17 CHEMICALS BY 50% BEFORE 31 DEC 96 AND TO NEAR ZERO BY 31 DEC 99, USING CY 92 BASELINE



AS OF: 31 Dec 94

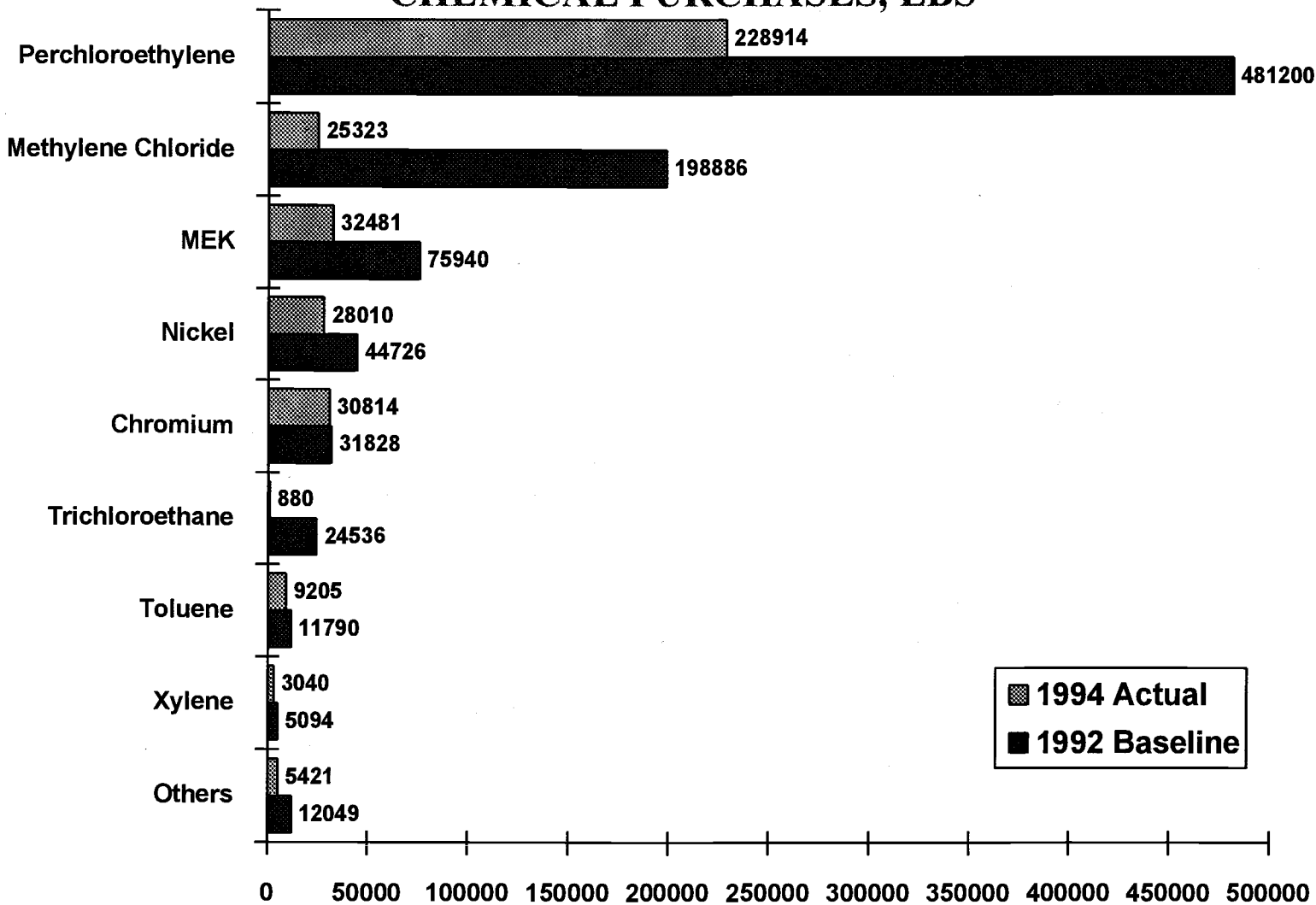
KELLY AFB EPA 17 REDUCTION IN PURCHASES CY REDUCTIONS



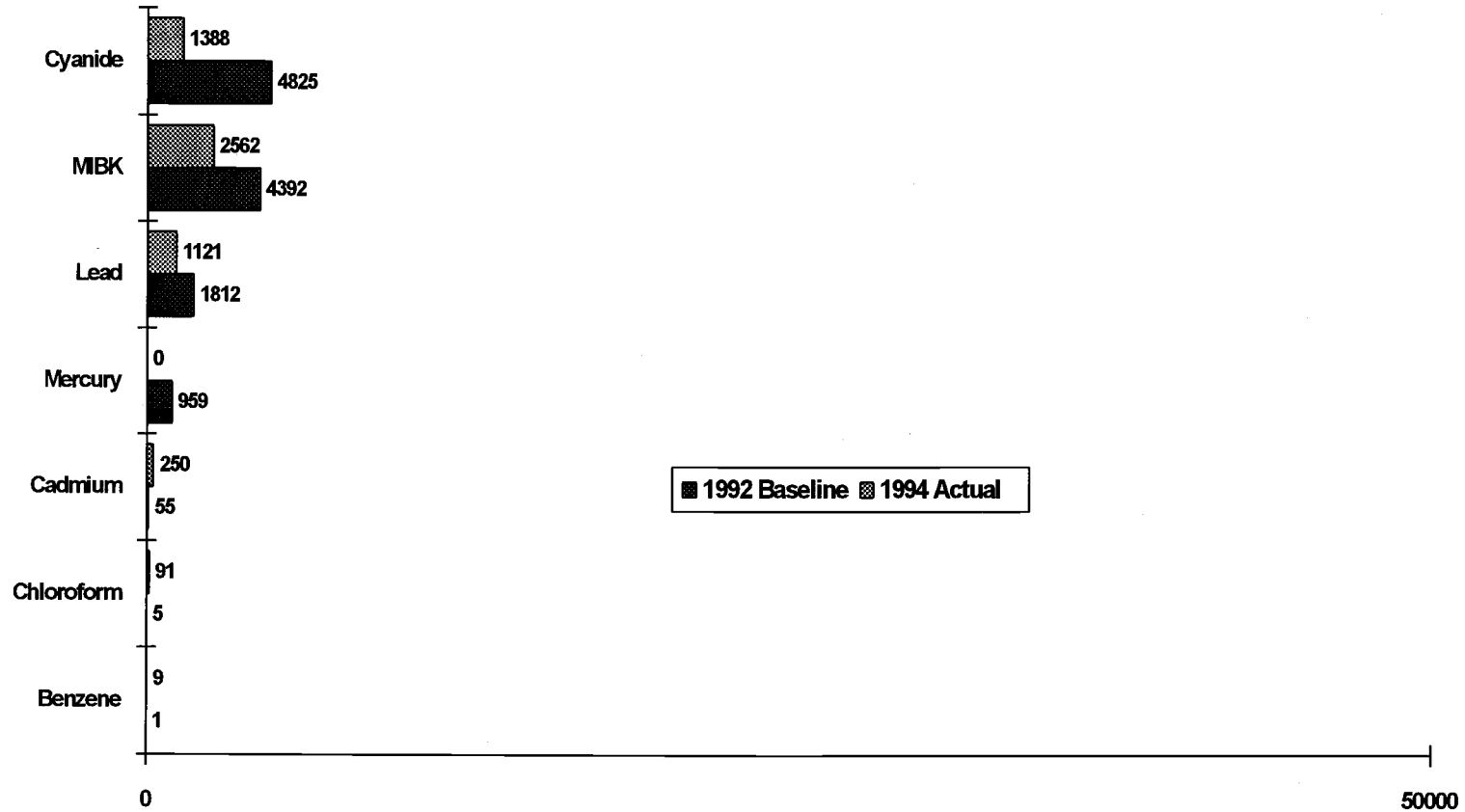
KELLY AFB

EPA 17 REDUCTION IN PURCHASES

CHEMICAL PURCHASES, LBS



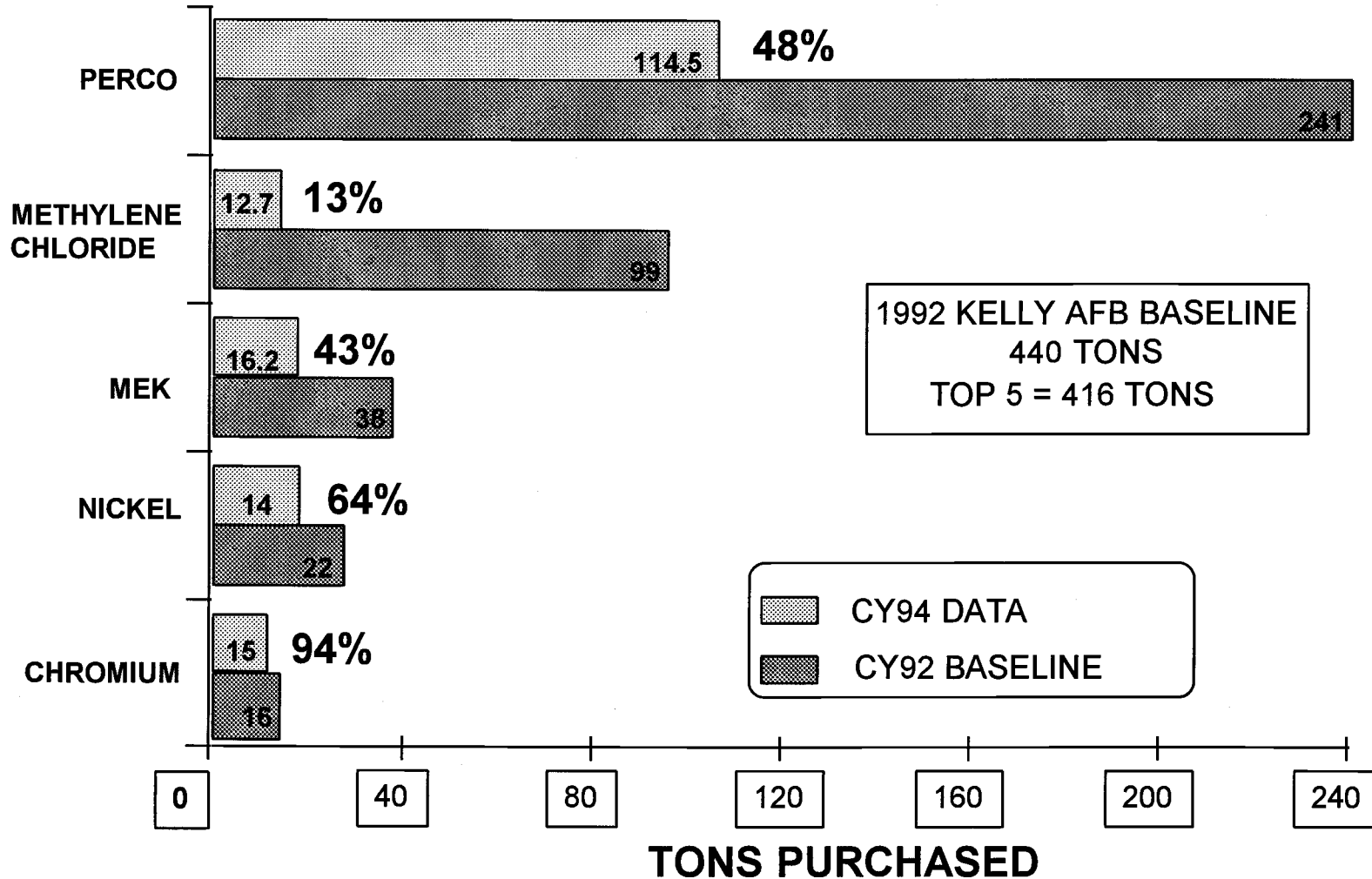
KELLY AFB EPA 17 REDUCTION IN PURCHASES CHEMICAL PURCHASES, LBS



EPA-17 REDUCTION

TOP 5 HAZMAT PURCHASES - SA-ALC

CY 94 DATA vs. CY 92 BASELINE



KELLY AIR FORCE BASE, TEXAS
INSTALLATION RESTORATION PROGRAM
TREATABILITY STUDIES

January 30, 1995

Kelly AFB has undertaken a series of bench-scale treatability studies to determine the ability of several innovative technologies to decontaminate soils and groundwater from IRP sites. To the extent possible, the technologies being tested result in contaminant destruction rather than simple contaminant transfer to a new matrix, i.e., taking a groundwater contaminant from water and placing it in the air or on activated carbon through an air stripping process. Many of the IRP sites at Kelly contain mixtures of hydrocarbons from both fuels and chlorinated solvents. The innovative technologies being tested may provide more economical, effective and efficient treatment than the technologies currently used for environmental remediations. Due to the similarity of sites on the base, these studies will be used to evaluate cleanup potential for all sites on Kelly AFB. The treatability studies that Kelly has undertaken are briefly described below.

Enhanced Oxidation - An innovative groundwater treatment technology involving ultraviolet light, catalyzed ozone, or hydrogen peroxide oxidation of organic compounds to carbon dioxide and water. Bench scale testing using Kelly groundwater indicates that this technology destroys contaminants of concern, including both fuel hydrocarbons and chlorinated solvents, to concentrations below detection limits. This technology began in November 1994 to treat contaminated groundwater from IRP Sites E-1 and 20 E-3 in Zone 2 and IRP Sites D-2, D-4, and D-5 for Zone 1. In addition, it will be used to treat contaminated groundwater from IRP Sites S-4, S-8, and OT-2.

Aerobic Biodegradation of Organics in Groundwater - The specific process being tested involves the use of methane-oxidizing bacteria to remove organics from Kelly AFB groundwater. This biodegradation process is unique in that the methane-oxidizing bacteria are able to aerobically degrade both volatile and semi-volatile chlorinated and fuel-related organics through a co-metabolic pathway. Common aerobic biodegradation treatment processes, such as those used by the Kelly Environmental Process Control Facility (EPCF), are not capable of degrading chlorinated organics at a sufficiently rapid rate to facilitate effective and efficient treatment of contaminated groundwater.

HAZ/CLEAR Groundwater Treatment - This process involves a potassium ferrate treatment chemical formulation which is capable of oxidizing inorganics and destroying organic compounds in groundwater. Extremely high removal efficiencies have been achieved for removal of radiological compounds. However, the HAZ/CLEAR process proved ineffective on Kelly AFB groundwater and will not be considered for further use.

Environmental Process Control Facility Study - The existing Environmental Process Control Facility (EPCF) at Kelly AFB has potential for use as the final groundwater treatment technology. The treatability study involving the (EPCF) focuses on the current plant's ability to remove or destroy the suite of groundwater contaminants identified during the remedial investigation in IRP Zones 1, 2, and 3 at Kelly AFB. The study will also identify any required modifications and/or additions to the existing plant to enable it to accept the full suite of groundwater contaminants and the associated additional hydraulic loading.

Soil Decontamination Solvent Extraction Procedure - The process being tested is patented by the Resources Conservation Company (RCC) as the Basic Extractive Sludge Treatment (BEST) process. The process uses a unique amine solvent that extracts contaminants from the soil matrix and dissolves in water at temperatures below 68°F but separates from water at temperatures above approximately 170°F. After subjecting a contaminated soil to the solvent extraction, the solvent containing the soil contaminants is drained and heated to separate the contaminated amine solvent from the water. A distillation process then separates the contaminants from the solvent. Because of favorable results from the bench top studies, the process has been considered in the feasibility studies for IRP Zones 1, 2 and 3.

Low Temperature Thermal Stripping - Low Temperature Thermal Stripping is a process by which volatile and semi-volatile hydrocarbons have been successfully stripped from soils. A majority of the contaminated soils from Kelly AFB IRP sites contain wastes mixed with halogenated and chlorinated hydrocarbons. The technology has proved successful in treating soils contaminated by petroleum hydrocarbons. This technology will be evaluated for soils from UST areas and other potential source removal actions.

Biodegradation Using Enhanced Indigenous Microorganisms - The study characterized the occurrence of microorganisms with toxic hydrocarbon degradative activities from several Kelly AFB contaminated soil samples. Organisms with enhanced degradative

activities were isolated, characterized, and preserved for future studies. A pilot study has evaluated whether the addition of nutrients and varying degrees of aeration (called biostimulation) can increase the organisms' degradative capabilities. This pilot study has been completed IRP Site E-3 in Zone 2.

Biobarriers to Stop Plume Migration - This study evaluated the potential for creating biologically generated obstacles to stop the migration of contaminant plumes in subsurface soils at Kelly AFB. Organisms were isolated and evaluated for their growth potentials and abilities to obstruct porosity and permeability. Based upon growth rates and metabolic requirements, certain organisms were collected for column studies. The bench top study indicated that the organisms displayed the capability to generate obstacles in the laboratory environment.

Radio Frequency Soil Decontamination Demonstration - This project is being conducted as a coordinated effort between Armstrong Labs and Kelly AFB, with support from the EPA and Department of Energy (DOE). This project will evaluate the feasibility of radio frequency (RF) soil heating in conjunction with soil vapor extraction to remove volatile and semivolatile contaminants from low permeability silt and clay soils. The RF technology demonstration has been conducted at IRP Site S-1. RF technology permits remediation of soils contaminated with semi-volatile hydrocarbons without excavation or off-site transportation of the contaminated soils. As landfill space becomes more limited and as air pollution regulations become more stringent, remediations involving contaminated soil excavation and removal will become increasingly cost-prohibitive. RF technology offers a viable alternative as an in-situ technology, and it will remediate sites much more rapidly than currently popular in-situ technologies such as bioremediation. RF heating and soil vapor extraction are EPA defined innovative technologies. A final evaluation of the RF demonstration will be available in Spring of 1995.

Hot Air Extraction Demonstration - This field demonstration used the Hrubout© Process to treat JP-4 contaminated soils at the 1100 Area. The process is a portable system for in-situ treatments that injects pressurized, super-heated air into the contaminated soil zone. Although hydrocarbons were removed from the soil, the test was not totally effective. Aspects were promising enough to warrant continued evaluation of the technology.

Bioventing - Two sites, S-4 and FC-2, at Kelly AFB are being used for an Air Force bioventing technology demonstration. Bioventing introduces oxygen to petroleum degrading microorganisms in the soils. The basic elements of bioventing include a well, or a series of wells, and a blower system that pumps air through the well into the ground. At Site S-4, the focus of the test will be the capillary fringe, while at Site FC-2 the entire soil column will be vented. In addition, at the 1100 Area, the pump and treat system will pull air through the capillary fringe, supplying fresh oxygen to the microbes which degrade petroleum. The intent is that a two-phased approach will reduce the amount of time needed for groundwater treatment.

FINAL PAGE

ADMINISTRATIVE RECORD

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