U.S. DEPARTMENT OF JUSTICE
OFFICE OF JUSTICE PROGRAMS
NATIONAL INSTITUTE OF JUSTICE

PROJECT REVIEW FORM

GRANT/CONTRACT #: 94-IJ-CX-0023

GRANT/CONTRACT TITLE:
External Review of the U.S. Border Patrol and Its Measures of Effectiveness

GRANTEE/CONTRACTOR NAME AND ADDRESS:
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PROJECT DIRECTOR AND ADDRESS:
E. A. Burkhalter, Jr.
(Same as Grantee)

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PRODUCTS

	TITLE AND AUTHOR	DATE SUBMITTED
1.	"External Review of the U.S. Border Patrol and Its Measures of Effectiveness for controlling the Southwest Border"	3/1/95
2.		
3.		
4.		

PROJECT MONITOR

		FROM	TO
1.	David G. Boyd	9/1/94	Present
2.			
3.			

OUTSIDE REVIEWERS

	NAME AND TITLE
1.	
2	
3	

STAFF REVIEWERS

1.	Dr. Raymond Downs	3.	
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PROJECT REVIEWER: David G. Boyd — DATE:

DIVISION DIRECTOR: — DATE:

OFFICE DIRECTOR: David G. Boyd, NIJ/OST — DATE: 10/24/95

(CONTINUED ON REVERSE)

I. FINDINGS AND SUBSTANTIVE QUALITY

Grant Manager's Assessment Report

Provide a narrative assessment *not to exceed 200 words* describing the following: problem addressed and major objectives, accomplishments, activities undertaken, principal findings and documents produced. This report will be entered into the Grant Profile System (PROFILE). For further clarification of the requirements, see chapter 7 of the effective edition of OJP HB 4500.2.

The purpose of this project was to provide a systematic and comprehensive review of existing U.S. Border Patrol Measures of Effectiveness (MOE), and the MOE plans and programs, as a means for making recommendations for improving MOE program effectiveness. MOEs were intended to provide guidance to U.S. Border Patrol units in order to maintain a high degree of surveillance and to interdict, as necessary, in border violation incidents. The project methodology focused upon interviewing staff and analyzing pertinent documentation. A senior task group of experienced analysts and policy makers familiar with border patrol operations was assembled to obtain the data and develop the recommendations. The recommendations addressed the flow of illegal alien crossings, technology with the purpose of increasing probability of intercept, infrastructure, operational considerations, and legal issues. The project recommendations included initiating 30 day "counting" exercised by San Diego Sector Station, establishing a mobile counting operation whereby a fleet of mobile counting stations would be positioned at key crossing points, using micro-electric mechanical systems, audio/visual systems, etc., constructing watch towers to be manned 24 hours a day, utilizing existing air unit helicopters, acquiring broadband code division multiple access communication satellites onto digital cellular telephone system, using pepper spray for crowd control, expediting the installation of the planned INS fingerprint/photograph ID system, establishing a dedicated logistics unit at border patrol headquarters, obtaining permission to use "sole source" purchase authority and buy commercial off the shelf equipment, installing Sandia recommended three-fence barrier system, and broadening the legal sanctions against violators.

EXTERNAL REVIEW OF THE U.S. BORDER PATROL AND ITS MEASURES OF EFFECTIVENESS FOR CONTROLLING THE SOUTHWEST BORDER

Submitted to
The National Institute of Justice

by

BURKHALTER ASSOCIATES, INC.

1 March 1995

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EXECUTIVE SUMMARY

On September 30, 1994, Burkhalter Associates, Inc. (BAI), was tasked by the National Institute of Justice (NIJ) to conduct an external review of the U.S. Border Patrol and its Measures of Effectiveness (MOE).

The purpose of the project was to provide a systematic and comprehensive review of existing Southwest Border Patrol Sector Measures of Effectiveness, and the MOE plans and programs, as a means of making recommendations for improving MOE program effectiveness. Technologies to improve the efficiency of Border Patrol operations were also to be considered.

The project methodology was to focus on interviewing Border Patrol Headquarters staff personnel and analyzing pertinent documents, such as the "INS National Border Control Strategy," Sandia National Laboratory Study, "Systematic Analysis of the Southwest Border," "Measuring Effectiveness of Border Patrol Sectors," etc. The project was to be conducted solely within the confines of the Washington, D.C. area.

BAI subsequently formed a senior task group with exemplary experience in the fields of technology and operations development and assessment, technology requirements development, and systems definition and analysis to conduct the review. Team members were

also experienced in addressing Border control issues because of past government assignments. The group consisted of the following:

VADM E.A. Burkhalter, Jr., USN (Ret.)
General Paul F. Gorman, USA (Ret.)
Dr. Ruth Davis
James H. Falk, Sr.
James E. Wise, Jr.

Briefings by senior Border Patrol staff personnel were held at U.S. Border Patrol headquarters in July and November of 1994. The most significant point made during these sessions was the fact that the Border Patrol could not estimate the flow of Southwest border illegal alien traffic with any degree of certainty. In this regard, the only data that is compiled on a daily basis is the number of apprehensions made by each of the nine Southwest border Sectors. However, without knowing how many actual crossings by different individuals as opposed to repeated crossings of the same individual are being made, this becomes a meaningless figure since there is no baseline against which to measure it and derive some estimate of border control effectiveness.

The Border Patrol Headquarters Staff at the Immigration and Naturalization Service requested that the BAI group study the issue and recommend methodologies and technologies for solving this critical problem. Thus, before the primary task of reviewing Sector/Station Border Patrol MOEs could be addressed, the flow issue would have to be resolved.

On 9 December 1994, BAI Task Group members visited the San Diego Sector, were given briefings by Sector officers, and then toured the Imperial Beach Station area of responsibility during the day and the Chula Vista Station border area that evening. On 6 February 1995, General Gorman conducted a follow-up tour of the Sector and two Stations.

On 18 January 1995, BAI Task Group members travelled to the Tucson Sector Headquarters and Nogales Station, where they received similar presentations and tours.

In brief, it appeared as if OPERATION GATEKEEPER was having some impact in the San Diego area, and that ambitious operation plus the successful HOLD-THE-LINE OPERATION at El Paso were beginning to divert the illegal flow northward in the central border area, particularly toward Nogales. On 10 February 1995, it was reported that the Station realized a record number of over 600 apprehensions.

The BAI findings during the aforementioned visits are discussed in the following report. They contain similar information found in other recent Southwest border reports. However, the BAI recommendations include solutions that could be considered as both innovative and practical. They offer near term remedies to address the flow problem; to increase the probability of intercept through technology applications; to resolve

infrastructure problems; to enhance operational procedures; and address complex legal issues.

These recommendations include the following:

a. Identify Flow of Illegal Alien Border Crossings

(1) Initiate 30 day "counting" exercise (Operation GATEWATCH) by San Diego Sector Station using wide array of equipment (low light cameras, video, infrared devices, etc.), both fixed and mobile, manned by National Guard, or retired military, intelligence and law enforcement personnel.

(2) Establish a mobile counting operation whereby a fleet of mobile counting stations would be positioned at key crossing points. The counting team would be used for counting purposes only and not be involved in apprehensions. Vehicle mounted and manually operated equipment such as scopes, low light cameras, infrared devices, etc. would be utilized. Vehicles would be relocated as the illegals changed their strategy.

(3) Consider use of micro-electric mechanical systems (MEMS), audio/visual systems, psychological

operations (PsyOps), acoustic sensors and ground level spray devices (for marking illegals) to enhance deterrent effect at the wall or fence line.

(4) Install unmanned image detection devices on 50-foot high self lowering surveillance camera poles. These devices must have capability to relay data to Station or Sector headquarters.

(5) Construct watch towers to be manned 24 hours a day. Counting can be done either at the tower or relayed to Station or Sector headquarters.

(6) Install cameras/video stations at San Ysidro Port of Entry.

(7) Consider use of Brown Field based commercial powered airship to relay video and thermal imaging of fence line.

(8) Utilize existing air unit helicopters to further enhance visual imaging.

b. Technology Applications to Increase Probability of Intercept

(1) Acquire Broadband Code Division Multiple Access (BCDMA) communications satellited onto digital cellular telephone system to ensure private communications capable of transmitting video and graphics.

(2) Supplement "geo-phones" with strewn MEMS pressure sensitive, or acoustic, sensors capable of providing tracking information.

(3) Improved situation awareness is needed. Modern sensor applications rely on networking that admits cueing one sensor with another, automates response wherever possible, and portrays decisional graphics to any human operator wherever he or she may be in the system. A differential Global Positioning System (GPS) could easily and cheaply track the location of deployed Border Patrol assets, and automatically display same on a graphic situation display. The current Border Patrol system is overly centralized, manpower intensive, and slow; the absence of graphics handicaps the many Border Patrol agents new to the Sector and unfamiliar with its geo-nomenclature. All personnel, new or old, would be advantaged by better situation awareness, especially during pursuit and apprehensions.

(4) Add utility helicopters to the fleet and develop tactics using Patrol vehicles to funnel illegals into a trap maneuvered into place by air.

(5) Use Pepper Spray for crowd control. Law enforcement units throughout the country are increasingly utilizing pepper spray effectively.

(6) Expedite the installation of the finger-print/photograph ID system now partially installed at San Diego Stations. Ensure information is linked to a common database.

c. Infrastructure

(1) Establish dedicated Logistics Unit at Border Patrol headquarters to track Sector needs and resolve bureaucratic bottlenecks. Similar units should be established at Sector level.

(2) Obtain permission to use "sole source" purchase authority and buy commercial off the shelf (COTS) equipment. However, R&D funding will be required to develop advanced linear sensors and better display technology. Logistics is the key!

(3) Establish small agent team from each Station to interact with Sector Chief on weekly basis to review problems and challenges confronting agents. Agents could also serve as tactical planners whose findings and requirements could be integrated into Sector-wide operational planning.

(4) Establish dedicated operational planning group in each Sector using non-agent, but experienced, personnel. This unit should have responsibility for planning each Sector's strategy in detail and executing changes when necessary.

(5) Establish state-of-the-art Command and Control Centers at Sector level. Military and law enforcement expertise and experience should be utilized in planning and construction of centers.

(6) It is imperative that a dedicated cadre of experienced intelligence personnel be permanently assigned to each Sector to integrate, analyze and disseminate collected human imagery and electronic intelligence to support the objectives of the INS Border Control Strategy and individual Sector operational plans.

(7) Delay in availability of new building for Nogales Station is unacceptable, especially with addition of new agents. Though money was allocated for new facility by GSA in 1991, Tucson Sector has been informed that no funds will be available before 1996. Action on this recommendation should be taken now!

(8) Establish an enhanced dedicated maintenance group at each Station to ensure maximum utilization and operability of equipment (trucks, buses, helos, communications and sensors).

(9) Hire retired Border Patrol, law enforcement, or military personnel to perform the following functions:

(a) Counting

(b) Planning

(c) Logistic Support

(d) Increased Maintenance

(e) Processing of Illegals

(10) Grant Border Patrol Chief authority for personnel management, logistics support, contracting and budgetary authority.

d. Operational Considerations

(1) National Guard engineering for San Diego Border Patrol is finest example of practical exercises for engineer heavy construction units this side of Honduras! Utilize Guard to finish and maintain fence on a priority basis.

(2) Install single person booths (manned by Border Patrol personnel) between vehicle lanes at POE, San Ysidro, to count, apprehend and deter "traffic runners". Also, extend chain link fence in roadway median which was built by Department of Transportation. Install similar fencing parallel to median fence on sides of the roadway to effectively funnel "traffic runners" to facilitate apprehension.

(3) Drop invisible substance on illegals from helicopters which could be excited by laser or infrared devices and viewed from above during night operations. Utilize same substance which could be ejected in a spray-like manner from buried sensors. Unaware of such markings, illegals would be less likely to take evasive action and thus be more subject to apprehension.

(4) Install Sandia recommended three-fence barrier system or cement waist-high barriers along fence line to pose immediate second obstacle to illegals and drug smugglers.

(5) Consider use of harassment techniques such as the use of loudspeakers by watch tower guards to direct orders to illegals, emit sounds of barking dogs during night hours (patrolling dogs would be in sight of "coyotes" during the day).

(6) Utilize highway checkpoints in San Diego and Tucson Sectors to expedite apprehensions. Initiate legislation to implement or further enforce this procedure.

e. Legal Issues

(1) Broader legal sanctions are needed against (1) recidivist detainees; (2) "coyotes"; (3) those who would direct violence against Border Patrol personnel.

(2) Require Visa recipients to furnish digital impression of fingerprints and photographs to be associated exclusively with Visa document.

(3) Offer legal entry document to any detainee who will identify a "coyote". Identity would have to be corroborated and lead to action being taken against the "coyote".

Finally, the BAI Task Group wishes to express its appreciation to the many members of the U.S. Border Patrol who gave of their valuable time to assist us in this endeavor. Border Patrol personnel were both forthcoming and comprehensive in presenting all aspects of their operations, both good and bad. They are a most impressive cadre of dedicated professionals.

EXTERNAL REVIEW OF THE U.S. BORDER PATROL

AND ITS

MEASURES OF EFFECTIVENESS FOR CONTROLLING

THE

SOUTHWEST BORDER

THE TASK

On September 30, 1994, Burkhalter Associates, Inc. (BAI), was tasked by the National Institute of Justice (NIJ) to conduct an external review of the U.S. Border Patrol and its Measures of Effectiveness (MOE).

The purpose of the project was to provide a systematic and comprehensive review of existing Southwest Border Patrol Sector Measures of Effectiveness, and the MOE plans and programs, as a means of making recommendations for improving MOE program effectiveness. Technologies to improve the efficiency of Border Patrol operations were also to be considered.

The initial project methodology would focus upon interviewing Border Patrol Headquarters staff personnel and analyzing pertinent documentation, such as operations plans of the nine Southwest Border Patrol Sectors, and other related documents. The project was to be conducted solely within the Washington, D.C., environs.

THE BAI TEAM

BAI subsequently formed a senior task group with exemplary experience in the fields of technology and operations development and assessment, technology requirements development, and systems definition and analysis to conduct the aforementioned review. Team

members were also experienced in addressing Border control issues because of past assignments. The group consisted of the following:

VADM E.A. Burkhalter, Jr. USN(Ret.)

In 1988, Admiral Burkhalter chaired an inter-agency task force for then Vice President Bush which studied issues related to the prevention of terrorists and narcotics traffickers from crossing U.S. borders; he and his Task Force visited Border Patrol facilities at both San Diego and El Paso and interviewed Headquarters personnel.

General Paul F. Gorman, USA (Ret.)

Former Commander-in-Chief, U.S. Southern Command.

Dr. Ruth Davis

Former Deputy Under Secretary of Defense for Research and Advanced Technology, and former Assistant Secretary of Energy.

James H. Falk, Sr.

As former White House Counsel he served as the Director of the White House Office of Intergovernmental Relations. Early in his career he served in public office as an Assistant City Attorney and City Prosecutor in Tucson, Arizona, and was counsel to the Anaconda Company and the El Paso Natural Gas Company in El Paso.

James E. Wise, Jr.

Executive Director for Law Enforcement Programs, BAI.

Prior to interviewing Border Patrol Staff members, the BAI Task Group collected and reviewed the following task related documents:

INS National Border Control Strategy

Border Patrol Strategic Plan 1994 and Beyond

Sector Strategic Plans and MOEs

Sandia National Laboratory study, "Systematic Analysis of the Southwest Border"

University of Texas at Austin Study: "Illegal Mexican Migration and the United States/Mexico Border: The Effects of Operation Hold-The-Line on El Paso/Juarez"

Statement of Barbara Jordan, Chair, U.S. Commission on Immigration Reform, before the Subcommittee on Immigration and Refugee Affairs, Committee on the Judiciary, U.S. Senate, August 3, 1994

GAO December 1994 Report: "Border Control: Revised Strategy is Showing Some Positive Results"

EXPANDING THE TASK

Briefings by senior Border Patrol staff personnel were held at U.S. Border Patrol headquarters in July and November of 1994. The most significant point made during these sessions was the fact that the Border Patrol could not estimate the flow of Southwest

border illegal alien traffic with any degree of certainty. Presently, the Border Patrol estimates that there are 300,000 illegal Southwest border crossings annually. However, this figure is derived from census taking, demographic studies, etc. There is no current, accurate method of systematically counting illegal crossings at the border.

The only data that is compiled on a daily basis is the number of apprehensions made by each Sector. However, without knowing how many actual crossings by different individuals as opposed to repeated crossings of the same individual are being made, this becomes a meaningless figure, since there is no baseline against which to measure it and derive some estimate of border control effectiveness.

The Border Patrol staff requested that the BAI group study the issue and recommend methodologies for solving this critical problem. Thus, before the primary task of reviewing Sector/Station Border Patrol MOEs could be addressed, the flow issue would have to be resolved.

Following these meetings, the BAI Task Group decided that to gain an understanding of current operations and methodologies being utilized at the border, Task Group members would have to visit Border Patrol Sectors/Stations to be briefed by field operatives and actually witness day and night operational activities. Thus, to supplement the flow task, visits to Border Sectors were added to

the BAI schedule. The visits were to be conducted at no additional cost to the government.

Since Operation GATEKEEPER, the most ambitious Southwest Border control endeavor to date, was underway in the San Diego Sector, it was decided to travel to that Sector to see GATEKEEPER in action and begin to understand the scope of the task assigned. And, since it would appear that the INS National Border Control Strategy is showing some positive early returns via GATEKEEPER and HOLD-THE-LINE at El Paso, it was decided to visit the second phase target of the INS Strategy, the Tucson Sector, to witness what impact these operations were having on this Sector and its Stations.

SAN DIEGO SECTOR VISIT

On 9 December 1994, BAI Task Group members were briefed by San Diego Sector Headquarters personnel, then further briefed and toured during the daylight hours by the Imperial Beach Border Patrol Station. That evening the group was briefed and given a night tour of the border by the Chula Vista Border Patrol Station. On 6 February 1995, BAI Task Group member General Paul Gorman conducted a follow-up visit in the expectation that developments in December and January might cause a revision of earlier judgments.

During both visits, BAI found that San Diego Border Patrol personnel at all levels exhibited a high degree of dedication and

professionalism. They spoke openly and freely of their needs and frustrations, yet felt that the Border Patrol was finally receiving much-deserved recognition. It was evident that Operation GATEKEEPER has been a definite boost for their morale.

Anecdotal evidence strongly suggests that GATEKEEPER has had the deterrent effect which was sought. Border Patrol appears to have succeeded in reducing the (still unmeasured) flow of illegals across the border between Ports of Entry. Recidivism data from the new fingerprinting and photo ID systems now in place should prove useful in further defining the scope of the problem and in identifying criminal aliens and "coyotes". It might even provide reliable data for initial attempts to develop a sound statistical study of the flow, although any such study must of necessity rely on broad assumptions which, though perhaps reasonable, are ultimately unverifiable. BAI believes that a 30-day counting exercise will complement and support statistical estimates of the flow.

In the meantime, despite the apparent initial success of GATEKEEPER, improvements to Border Patrol effectiveness continue to be impeded by inadequate technology and command and control infrastructure, as well as by the lack of an established legal framework sufficient to support their efforts. With respect to the latter, Border Patrol successes are often undone by a legal system which provides few effective sanctions against multiple border crossings by both individual aliens and smugglers.

Although apprehensions alone do not constitute deterrence, it is clear that rates must be driven upwards as part of the effort to deter illegal entry. With that in mind, BAI has developed several innovative recommendations in support of the INS National Border Control Strategy which it is believed will support increased apprehensions and deterrence both at the border and within the interior of Mexico.

TUCSON SECTOR VISIT

On 18 January 1995, BAI Task Group members travelled to the Tucson Sector Headquarters and Nogales Station. The visit began with a brief meeting at Sector Headquarters where discussions were held with senior management concerning the nature and scope of the threat and their assessment of the Sector's needs. Particular emphasis was placed on the bureaucratic and general systemic obstacles to obtaining the material resources and personnel needed to effectively carry out the Sector's mission.

The problem is particularly acute at the Douglas and Nogales Stations, which are bearing the brunt of the apparent success of Operations GATEKEEPER AND HOLD-THE-LINE in restricting the flow of aliens across the border. The rapidly growing influx of alien traffic through other corridors, especially at Nogales, was anticipated by the INS National Border Control Strategy, and there now exists a good deal of anecdotal evidence-- gathered mostly from interviews with detainees--to corroborate its assumptions

concerning the likely shifts in flow patterns to the southern Arizona and southwest Texas border areas.

Although implementation of the INS National Border Control Strategy in the Tucson Sector is not foreseen for at least another year or two, there remain a number of issues which can and must be addressed in the interim. At Nogales Station, in particular, competent and dedicated Border Patrol officers are working under very frustrating and demoralizing conditions. The Station lacks necessary supervisory and support personnel, vehicles, equipment and contracting support. In addition, the Nogales facility, an abandoned Volkswagen dealership, is woefully inadequate to support existing personnel--let alone the 62 agents who have recently been reassigned and the 60 agents scheduled to arrive soon from the Academy.

The introduction of new agents, while a necessary and welcome development, must be accompanied by adequate augmentation of support and infrastructure as well as improved technology. BAI believes that ignoring these needs at this critical time will most likely result in administrative difficulties for Sector and Station personnel, impeding both the immediate task of dealing with the increased flow of aliens through the corridor and greatly complicating implementation of the INS National Border Control Strategy in the future.

RECOMMENDATIONS

Measuring the Flow

There are several avenues of access for illegal aliens to cross the border: the vast open areas between the established ports of entry (POE's) where the great majority of illegal entries occur; unimpeded access through POE's on foot, i.e., "traffic runners"; covert vehicular entry; and use of false documents.

Interviews with Border Patrol officials and recent studies relating to the border (e.g., Sandia National Laboratory Report of 23 January 1993, GAO report of December 1994) reveal that the largest portion of illegal crossings, approximately 66%, occur in 4.7% of the border. That crossing percentage is contained in two Sectors, San Diego and El Paso. Other parts of the frontier are in most cases too rugged or mountainous to permit easy access by illegals who are not equipped to travel across such hazardous terrain.

In the two Sectors that were visited, the vast majority of crossings occurred along approximately 18 miles of the border (14 miles that include Brownfield, Chula Vista and Imperial Beach San Diego Stations and 4 miles of the border at Nogales). The completion of the border fence in both of these areas should force illegal crossings into still more confined areas where aliens can be systematically counted and apprehended.

As noted above, illegals continue to run unimpeded through the southbound middle traffic lanes at the Chula Vista POE. It is estimated that at least 100 aliens per day use this method to gain entry into the United States.

However, we are convinced that measuring the flow of illegals through POE's and through the limited areas between POE's where it normally occurs can be accomplished with a high degree of reliability by the adoption of a Flow Strategy which would produce for the first time a workable baseline from which to measure the effectiveness of border control at each of the nine Southwest Border Sectors. The methodology recommended would additionally enhance opportunities for increased apprehensions, further contributing to the National Strategy of deterrence.

There are four principal components to the Flow Strategy:

a. Place more emphasis on the use of terrain mapping as a means of concentrating on the most probable entry areas and prioritize the suites of sensors selected to match high priority entry areas.

b. Assign a dedicated group of Sector personnel, other than Border Patrol agents, to perform three tasks:

(1) Analyze the Sector's border and determine the principal areas that illegals are using for entry.

(2) Once the appropriate mix of sensors is in place, this group would be the focal point for receipt of all data related to border crossings. They would integrate all incoming intelligence and track the flow on a daily basis. They would also revise the strategy when appropriate.

(3) Based on the nature of the information being received, the group may then advise the Sector and Station chiefs on how best to direct their assets to increase apprehensions and, eventually, deter entry.

c. The third component of the strategy will be the positioning of a series of sensors described in detail on the following pages. The devices will be mounted at key crossing areas as recommended by the Sector analytical group. The sensors may at first be mobile in an effort to expedite the process, but they should eventually be placed at fixed sites. Flow information may be counted by various imaging and electronic devices and HUMINT sightings at the entry points, then relayed to the analytical unit and Sector headquarters.

d. The fourth component of the strategy should be airborne surveillance that will supplement existing airborne

units. Balloons (including commercial vehicles) and drones or Unattended Air Vehicles might also be utilized.

The following paragraphs outline several operational and technical options for implementing this Flow Strategy.

Operational Options for Measuring the Flow

a. Operation GATEWATCH: Since the methods and technologies suggested to identify the flow on a continuing basis will take time to be reviewed, approved, funded and implemented, it is recommended that a one month field exercise be initiated as soon as possible at a Southwest border Station to gain early-on experience and credible data regarding this critical issue. One month has been chosen because it appears to represent a non-repetitive flow life cycle, after which repetitive patterns of flow would probably occur.

The exercise would have to be enthusiastically endorsed by appropriate INS and Border Patrol Headquarters officials and the selected area Station and Sector Chiefs. It would have to be energetically executed by personnel assigned to the project and not be considered as a measurement of Station performance by those concerned. Working with his senior staff personnel, the Station Chief would be the principal planner for the exercise.

Essentially, it would be a counting exercise conducted in the field by personnel dedicated solely to the project. The following elements would be involved.

(1) The cadre of personnel assigned to the project would be other than Border Patrol personnel assigned to a selected Station. This is recommended so as not to disrupt a Station's operations. Resources which might comprise this group could be sought from units such as the National Guard, Reserve Military units and other officers, retired military (preferably intelligence oriented personnel), and other ex-government security experienced personnel, e.g., NIS, CID, OSI, etc. The cadre would consist of "counters" either on foot or in vehicles. Since the project would be a twenty-four hour operation, personnel would be equipped with low light cameras, video cameras and infrared devices.

(2) The aforementioned equipment would, in most cases, have to be borrowed from the appropriate government agencies, including military organizations, to ensure that adequate numbers of primary and backup devices are available to complete the project.

(3) The operation would require the following surveillance:

(a) Day

(b) Night

(c) Fence - on foot

(d) Highway - on foot

(e) Vehicle assisted

(f) Tunnel

(g) Water

In addition to the on-the-ground "counters," the operation would require day and night helicopter surveillance, especially along the fence line, to verify counting data. Commercial balloons could also be contracted to assist in the count.

To integrate the information collected and analyze the results of the multi-faceted surveillance effort would require a group of trained intelligence analysts who would work in teams around the clock. They would concentrate their efforts on terrain study, fence line sightings, camera day/night recordings, "Traffic runners," and seismic intelligence type data to establish where the flow currently exists. Such personnel might be drawn from the military intelligence reserve force or, as mentioned above, retired local law enforcement officials and intelligence personnel.

From our brief survey of the Southwest Border Sectors and Stations, it would appear that the Chula Vista Station might be a good candidate to conduct this exercise. The terrain along their segment of the border

is both rugged and somewhat level. The Station has surfaced a sophisticated tunnel and there is a possibility that more undetected underground throughways are in operation. It has a Port of Entry which would permit surveillance of "traffic runners." Most importantly, Station officers who are professional and highly dedicated were vocal in their request for help in establishing the flow across their Station borderline. It was their number one priority.

b. Mobile Counting Operation: Establish a mobile counting operation whereby a fleet of vehicular counting stations would be positioned at key crossing points, perhaps, in a line beyond the fence line and the tower lights. Personnel manning the vehicles would be equipped with scopes, low light cameras, infrared devices, etc. Sensors could be either mounted on the vehicles or operated manually by counting personnel. Each Station would be manned 24 hours a day and each would be responsible for a quadrant of terrain (not necessarily overlapping).

The counting team would perform a counting mission only and not be involved in apprehensions. The personnel used for this mission could be non-Border Patrol (Here again the use of local retired military and law enforcement personnel should be considered). They would

be primarily equipment operators but would relay information regarding illegals back to Command and Control centers as necessary. Their equipment would be linked back to the C&C centers where analysts would collate the data and provide estimates of the flow for any given Station within a Sector.

Various vehicle positioning tactics could be planned according to the terrain and/or other unique features of a particular Station. The vehicles could be relocated as the illegals changed their strategy. Also, times of operation would be per history of traffic movement for a given area.

c. Exploiting the Wall: Sector Border Patrol personnel acknowledge that the high, steel-plank wall demarcating the border is of use in channeling illegal entry. For instance, women and children only rarely attempt to jump from the top of the wall to the ground on the US side, and those that have reportedly often injure themselves, slowing their progress beyond. Even young men seem to prefer going under the wall through culverts, or through holes cut by welding torch, to scaling the wall. With five modest additions, the wall could be converted into a mechanism for counting illegal entry: (1) emplace a string of pressure sensitive sensors (e.g. micro-electric mechanical systems, MEMS) along the top of the

wall set to convey exact location of any load of 50 pounds or more; (2) where climbing the wall is avoidable, install surreptitious audio/video systems to observe and to count passages; (3) at places where crossers congregate before crossing, put up PsyOps signs and install hidden microphones to collect intelligence about what they are saying prior to entry; (4) at other places along the wall, emplace sensors optimized to detect (a) cutting of ports, and (b) the distinctive thud of an entrant landing after a jump; (5) install ground level spray devices to dispense a non-injurious, invisible marker dye below knee height, said devices to be activated by the sensors of (1), (2) and (4).

d. Unmanned Surveillance Counting Stations: Install image motion detection devices on self-lowering surveillance camera poles. These would be fixed surveillance sites positioned to provide quadrant coverage of the most active avenues of illegal traffic activity. Such devices affixed atop 50-foot poles could relay real-time data and record movement of individuals and individuals in groups, provide direction of such activity and be tamper proof because of the construction of the pole devices.

Rugged portable video, low light cameras, and thermal imaging systems such as those manufactured by Technical Services International, Inc., of Reston,

Virginia, should be continued to be investigated by the Border Patrol. It is understood that one such system has recently been purchased by the Tucson Sector Santa Theresa Station for use along its border segment. (See Attachment A.)

Integrated systems such as the above could be mounted on tamper proof surveillance poles similar to those produced by Millerbrand Manufacturing Company of Winsted, Minnesota. The 50-foot poles have been successfully used to monitor freeway traffic, parking lots and other remote locations. The poles are formed of high strength 50 KSI self-weathering American steel and are built in an octagonal shape with a continuously tapered shaft. The poles can be raised and lowered by a single person without special equipment and are ideal for uneven terrain applications. (See Attachment B.)

e. Watch Towers: Install a line of "Watch Towers" beyond the stanchion lights that are positioned along the immediate fence area. These towers would be manned 24-hours a day and be equipped with infrared devices, searchlights, high powered scopes and cameras, seismic data displays, Border Patrol vehicle tracking displays and loudspeakers. The towers should be positioned so that their areas of coverage overlap each other. Towers might be manned by non-Sector personnel such as

Army/Marine Corps reserves, National Guard, ex-"Corrections" personnel who are experienced in watch tower operations, or newly assigned Border Patrol officers if other options were not available.

Tower design should avoid any resemblance to prison or "Berlin Wall-like" structures. Collected crossing data would be relayed to the Command and Control Centers for integration into a flow model.

f. On The Beach: A static "Watch Tower" on the beach (Imperial Beach Station) would adequately monitor that area with manning similar to that described in subparagraph e. Also, additional boats and underwater acoustic system monitors could be added to that tower's capabilities to assist in identifying the flow in the area.

g. Port of Entry: Regarding the illegals crossing the San Ysidro Port of Entry along southbound traffic lanes, monitoring recommendations include the following: Installation of cameras/video stations on both sides of the roadway at the Port of Entry and below the overpass nearest the POE to record the flow and identify smugglers. Infrared devices should be included in this array. Collected data would be relayed back to the Sector Command and Control Center.

h. Air Support: Our group has thought about how to provide the Border Patrol with an overhead visualization of their Sector as a basic aid to operations--some of us have mentioned satellites, UAVs, and the above towers. Given what has already been done with change detection capability in digital imagery, these are reasonable proposals. But there may be a much cheaper, near-term alternative: based at Brown Field is a commercial powered airship that carries aloft advertising on its gas bag. Conceivably its owners would entertain a contract to put their ship up at night to relay to the Sector Command and Control Center a video image of the lighted areas along the fence; or the airship could provide thermal imaging of the entire Sector to further enhance flow determination and provide operational data for actual apprehensions. Also, utilize existing air unit helicopters to further enhance visual imaging, but the operating status of the helicopter unit should be significantly upgraded.

Technology Applications to Increase Probability of Intercept

The Immigration & Naturalization Service believes that higher apprehension rates are imperative for deterrence of illegal entry; the report, "Controlling the Southwest Border," dated September 1993, asserts that when the Border Patrol achieves a 50% apprehension rate, a border crosser will

succeed on his second attempt, while a 15% increase in the apprehension rate changes the requirement to three attempts--but deterrence requires 90% or better apprehension. Whether that model is correct is open to question, but for deterrence it seems evident that the apprehension rate must be driven up; and a system should be devised that detects and reports all entrants, whether detained or not.

a. Secure, Multi-Media Communications: Border Patrol ought to acquire broadband code division multiple access (BCDMA) communications satellited onto a digital cellular telephone system so that it could be assured of continuous private communications capable of transmitting video and graphics. Sensors, computers, and displays should be networked by that system.

b. Strewn Sensors (MEMS): Border Patrol believes that its current "geo-phones" convey insufficient information about the nature of each activation and, in particular, furnish insufficient sensing of direction and speed of movement. Any "geo-phone" activation could trigger an overwatching camera to transmit a digital image of the activating event. In any event, the "geo-phones" should be supplemented with strewn sensor fields composed of thousands of MEMS pressure sensitive, or acoustic, sensors capable of providing tracking information.

c. Situational Awareness: Modern sensor applications rely on networking that admits cuing one sensor with another, automates response wherever possible, and portrays decisional graphics to any human operator wherever he or she may be in the system. A differential Global Positioning System (GPS) could track the location of deployed Border Patrol assets easily and inexpensively and automatically display same on a graphic situation display in state-of-the-art Command and Control Centers. The current Border Patrol system is overly centralized, manpower intensive, and slow; the absence of graphics handicaps the many agents new to the Sector and unfamiliar with its geo-nomenclature. All personnel, new or old, would be advantaged by better situational awareness, especially during pursuit and apprehensions.

d. Airmobile Operations: Border Patrol is currently operating old, two seater, scout helos, availability of which suggests scrapping and replacement. Any military commander considering Border Patrol operations would suggest adding one or two utility helicopters to the fleet and developing tactics based on using the patrol vehicles to funnel the illegals into a trap maneuvered into place by air. The trap could consist of a half dozen officers afoot, equipped with powerful lights, loudspeakers, and other apparatus tailored for apprehension.

e. Use of Pepper Spray (Oleoresin Capsicum/OC): This proven law enforcement technology should be used for crowd control once an apprehension is made.

f. Fingerprint/Imaging ID System: Expedite the installation of the fingerprint/photograph ID system now partially installed at San Diego Stations. Ensure information is linked to a common database.

g. BAI concurs with the technological findings and recommendations contained in the Sandia National Laboratories Southwest Border Report of January 1993.

Infrastructure

Logistics, personnel management and facilities improvement, along with adequate funding, are clearly needed by both the Sectors visited by BAI. While the problem is more acute in the Tucson Sector, the San Diego Sector would also benefit from increased attention to these issues.

a. Logistics: BAI recommends that a dedicated Logistics Unit be established at Border Patrol Headquarters in Washington, D.C., to track each Sector's needs and resolve bureaucratic bottlenecks. Similar units should be established at each of the Sector headquarters to track individual Station's needs and coordinate with

Washington. This could be handled as a collateral duty by a yet to be determined number of Border Patrol officers, depending on the level of activity within the Sector. The Logistics Unit should begin immediately to address such problems as obtaining transfer funds for open (and otherwise funded) billets, developing efficient contracting support for Station vehicles and equipment and, generally, seeing to it that Border Patrol requisitions are given higher priority than they currently receive. One solution would be that Border Patrol be granted permission to use "sole source" purchase authority and buy commercial off the shelf (COTS) equipment. However, R&D funding will be required to develop advanced linear sensors and better display technology.

While the objective of the Logistics Unit would be to expedite movement of personnel and material and resolve bureaucratic conflicts as they arise, BAI is aware that its effectiveness will ultimately depend on the degree of empowerment granted by INS. It is, nevertheless, the opinion of the Task Group that the Unit should be formed now to serve in the interim as an organized means of bringing some of Border Patrol's more urgent problems to the attention of the relevant decisionmakers. Some such structure may also be useful

to Border Patrol Headquarters if and when reorganization occurs within INS.

b. Operational Planning: A small team of Border Patrol agents (1-2 persons) from each Station should be tasked to debrief shift supervisors to ascertain problems and lessons learned. They should meet weekly with the Sector Chief to review all aspects of the operation, making sure that the Chief is aware of the problems and challenges confronting his agents. This function could be assigned on a dedicated basis or as a collateral duty, as Sector and Station needs and resources dictate.

Debriefing personnel would also serve as tactical planners, and every attempt should be made to integrate their findings and requirements into Sector-wide operational planning.

c. Command and Control Centers: The most efficient method by which to accomplish operational planning integration is through the establishment of a state-of-the-art Command and Control Center at Sector Headquarters where all Sector activities can be monitored. This must be a leading-edge technology system capable of directing the kinds of fast-moving, complex activities which characterize Border Patrol operations. The U.S. military has vast experience in this area and should be requested

to design and develop such a system for Border Patrol. Additional support in developing C&C center systems is available through local contractors, highly experienced in such projects.

d. Establish and Man Sector Intelligence Units: It is imperative that a dedicated cadre of experienced intelligence personnel be permanently assigned to each Sector to integrate, analyze and disseminate collected human and electronic intelligence to support the objectives of the INS Border Control Strategy and the individual Sector operational plans. Such units should be stationed in the Sector Command and Control Centers to ensure team coordination in meeting Sector intelligence requirements.

e. Facilities Improvement. The problem of the Nogales Station facility should be addressed immediately. Money was allocated through GSA for a new building in 1991, but Tucson Sector has been told that no funds will be available before 1996. This is completely unsatisfactory and clearly is having a negative impact on agent morale and efficiency. The problem will be compounded with the additional agents soon to be assigned to Nogales.

f. Increased Maintenance: To ensure maximum utilization and operability of equipment (trucks, buses, helo,

communications and sensors), it is recommended that an enhanced dedicated maintenance group be established at each Border Patrol Station.

g. Utilization of Retired Personnel: Hire retired Border Patrol, law enforcement, or military personnel to perform the following functions:

(a) Counting
(b) Planning
(c) Logistic Support
(d) Increased Maintenance
(e) Processing of Illegals

h. Authority for Border Patrol Chief: Grant Border Patrol Chief authority for personnel management, logistics support, contracting and budgetary authority.

Operational Considerations

a. Finish the Fence Line/Improve Condition of Patrol Roads. In recent decades opportunities to train realistically Army combat units have become severely limited, both because of the environmental impact of heavy construction, and because of commercial objections to having military units preempt prospective contracts. Hence, beginning in 1983, the National Guard undertook

engineer missions in Central and South America, expensive, and politically risky, but easier than trying to overcome domestic constraints. The National Guard engineering for the San Diego Border Patrol is the finest example of practical exercises for engineer heavy construction units this side of Honduras! The Guard should be utilized to finish and maintain the fence on a priority basis.

b. Port of Entry "Traffic Runners." Install single person booths between the Southbound vehicle lanes at the San Ysidro Port of Entry to be manned 24 hours a day by Border Patrol personnel. Vehicle traffic flow lanes would have to be adjusted to facilitate apprehensions. This measure in itself could have a desired deterrent effect on this particular problem.

Also, extend chain link fence in roadway median which was built by the Department of Transportation. Install similar fencing parallel to median fence on sides of roadway to effectively funnel "traffic runners" to facilitate apprehension.

c. Mark the Illegals. Drop invisible dye substance on illegals from helicopters during night operations which could be excited by lasers or infrared devices to assist in overhead tracking and ground apprehension. Also,

utilize same substance which could be ejected in a spray-like manner from buried sensors. Unaware of such markings, illegals would be less likely to take evasive action and thus be more subject to apprehension. Also, marked illegals would be easier to identify once they infiltrated urban areas. Sarnoff Research Center of Princeton, New Jersey has developed such a substance which has been operationally deployed.

d. Fence Line Barriers. If the Sandia recommended three-fence barrier system is not deemed feasible; consider positioning a line of cement barriers (similar to those used around the White House) along the fence line within ten yards of the fencing to pose an immediate second obstacle to illegals and drug smugglers who blowtorch the fence and drive vehicles through it.

e. Watch Tower PsyOps. The addition of watch towers, cited above could be equipped with loudspeakers for guards to give orders to transiting illegals. The loudspeakers could also direct the sounds of dogs barking during night hours (patrolling dogs would be in sight of "coyotes" during the day). These techniques would be used for harassment purposes which could result in additional measures of deterrence.

f. Highway Checkpoints: Utilize highway checkpoints in San Diego and Tucson Sectors to expedite apprehensions. If legal constraints currently preclude taking such action, then legislation should be initiated to correct this situation.

Legal Issues

a. Establish a Legal Framework. Laws governing crossing the border, and related administrative regulations and procedures, scarcely support the Border Patrol's mission. On the one hand, the United States ought to make it easy for responsible, potentially productive foreigners to obtain valid entry documents, and should protect said documents against forgery and other abuse. On the other hand, the law ought to provide broader sanctions against (1) recidivist detainees; (2) "coyotes" or others who derive profit from aiding and abetting illegal entry; (3) violence directed against the Border Patrol.

As for detainees, the concept should be to convince that illegal entry jeopardized legal entry. One approach might be a publicity campaign to build up the importance of legal entry for specified short-terms and purposes via a non-forgeable, individual-specific document and at the same time establish periods of ineligibility for said

legal entry as a sanction against attempting illegal entry.

New legislation is particularly necessary to establish sanctions against "coyotes," those professional border-crossers who collect a fee from illegal aliens for guiding them across the border, provide them forged documents, or otherwise profit from abetting border violations. However unlikely cooperation and parallel action by the Mexican government might be, the U.S. should request same, and should in any event arrange that a "coyote" taken into Border Patrol custody be treated differently from other detainees, and sentenced to fines, detention, and deported as a criminal alien.

b. Issue "Non-forgeable" Visas. Applicants for legal entry should be made to understand that the document they receive is specially made to reveal tampering to U.S. Customs officers. Further, the recipient should be required to furnish a digital impress of fingerprints and photographs to be associated exclusively with the document, and told that only if the prints and picture match the document at the port of entry will entry be permitted. The U.S. should also invest in special papers, inks, and other precautionary steps to narrow prospects for forgery of the document itself.

c. Raise Risk for the "Coyote." To encourage identification and successful prosecution, the Border Patrol should be allowed to offer a legal entry document to any detainee who will identify a "coyote." Identity would have to be corroborated and lead to action being taken against the "coyote."

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- Region "A" + Region "B" + Region "C"
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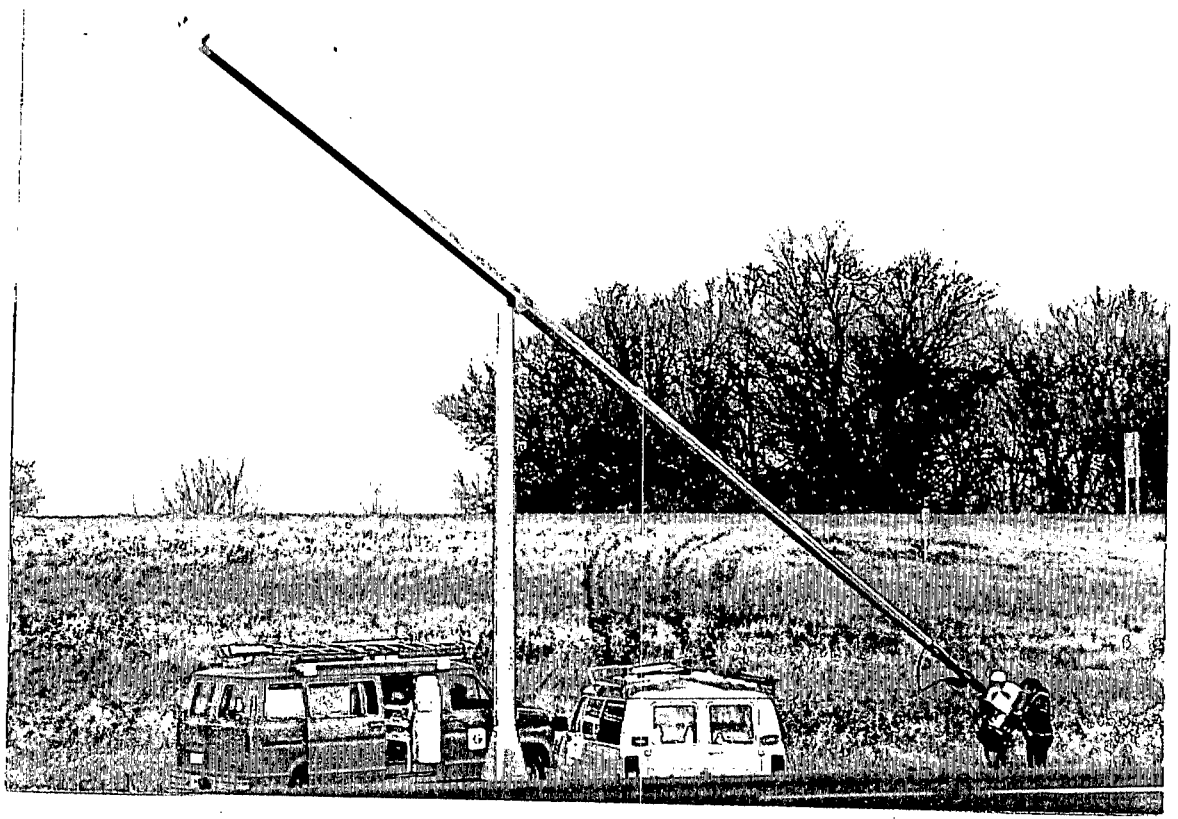
ATTACHMENT B



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