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Drug Enforcement Administration
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U.S. Department of Justice
Drug Enforcement Administration
FOI/Records Management Section
8701 Morrisette Drive
Springfield, Virginia 22152

Case Number: 14-00119-F

FEB 07 2014

Subject: Requesting a copy of the most recent DEA report on the "Signature" Program

This letter responds to your Freedom of Information/Privacy Act (FOI/PA) request dated November 27, 2013, addressed to the Drug Enforcement Administration (DEA), Freedom of Information/Privacy Act Unit (SARF), seeking access to information regarding the above subject.

The processing of your request identified seven (7) pages that will be released to you in their entirety. The documents are being forwarded to you with this letter.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV 2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you are not satisfied with the response to this request, you may administratively appeal by writing to the Director, Office of Information Policy, United States Department of Justice, Suite 11050, 1425 New York Avenue, NW, Washington, DC 20530-0001, or you may submit an appeal through OIP's eFOIA portal at <http://www.justice.gov/oip/efoia-portal.html>. Your appeal must be received within sixty (60) days from the date of this letter. If you submit your appeal by mail, both the letter and the envelope should be clearly marked "Freedom of Information Act Appeal."

If you have any questions regarding this letter, you may contact FOI Specialist Jane Edmonds on (202) 307-7603.

Sincerely,

A handwritten signature in black ink that reads "Katherine Myrick". The signature is written in a cursive, flowing style.

Katherine L. Myrick, Chief
Freedom of Information/Privacy Act Unit
FOI/Records Management Section

DEA Intelligence Report

DRUG ENFORCEMENT ADMINISTRATION
INTELLIGENCE DIVISION

February 2013
DEA-NWW-RPT-004-13



(U) Heroin Signature Program: 2011

Overview

Each year several hundred heroin samples are analyzed through the Drug Enforcement Administration (DEA) Heroin Signature Program (HSP) to identify the geographic area – South America, Mexico, Southwest Asia, or Southeast Asia – in which the samples were manufactured. Since its inception, the HSP has proven a valuable indicator of changes in the supply of heroin and provides insight into the wholesale level of heroin trafficking to the US.

Background

The Heroin Signature Program (HSP) is one essential component of the Intelligence Division's ability to identify trends in heroin trafficking and distribution in the US. The objective of the program is to identify and quantify the chemical constituents of heroin seized at US ports of entry (POEs), all non-POE heroin exhibits weighing over one kilogram, randomly chosen samples, and special requests for analysis.¹ Samples submitted to the HSP undergo in-depth chemical analysis at the DEA Special Testing and Research Laboratory (SFL1). Once analyzed, each heroin sample is classified by the process by which it was manufactured, which enables the association of each sample to a specific geographic source region.



Signature analysis is currently the only scientifically-based source of information available to determine the origin of heroin encountered in the US drug market. HSP chemical analysis data, combined with investigative and intelligence reporting, allow for the identification of possible changes in the geographic source and purity of heroin in the US, as well as changes in trafficking routes and methods. The program continually undergoes quality assurance by obtaining and analyzing authentic samples obtained from the primary heroin production regions.

2011 Heroin Signature Program Results

In 2011, heroin from Mexico (MEX) accounted for 50 percent (by weight) of the heroin analyzed through the HSP. Heroin from South America (SA) and Southwest Asia (SWA) accounted for 43 and 7 percent, respectively. No Southeast Asian (SEA) heroin exhibits were submitted to the program in 2011. Over 1,000 exhibits, totaling approximately 1,865 kilograms of heroin, were analyzed in 2011 by the SFL1. Of those exhibits, 878 exhibits, representing approximately 1,468 kilograms, were classified through the HSP (see Table 1).²

¹ The HSP provides a snapshot of wholesale heroin trafficking in the US. In contrast to the HSP, the DEA Heroin Domestic Monitor Program (HDMP) is a quarterly purchase program designed to identify the purity, price, and source of origin of heroin available at the retail level in 27 US cities.

² Since all heroin seized in the United States is not submitted for analysis through the HSP, the source area proportions reported through the HSP should not be characterized as market share. Fluctuations from year to year in source area proportions may reflect shifting law enforcement priorities, changes in trafficking patterns, or exceptionally large seizures that may boost the HSP representation of a particular source area. To achieve a comprehensive assessment of heroin smuggled to and trafficked in the United States, HSP data must be used in conjunction with investigative intelligence, drug production estimates, and seizure statistics.

TABLE 1: HEROIN SIGNATURE PROGRAM GEOGRAPHIC SOURCE AREA SUMMARY

Source Area	Average Purity		Percentage by Weight		Weight of Samples (kilograms)		Number of Samples	
	2010	2011	2010	2011	2010	2011	2010	2011
South America	50%	53%	53	43	579	633	290	434
Southwest Asia	40	39	14	7	155	103	117	84
Mexico	33	34	33	50	356	732	227	360
Southeast Asia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL	N/A	N/A	100	100	1090	1468	569	878

In 2011, approximately 21 percent of the heroin samples submitted for analysis through the HSP were classified as "Unknown." Samples are classified as "Unknown" when the signature profiles of the samples are not consistent with the signature profiles of authentic heroin samples collected from one of the four geographic source regions.

CHARACTERISTICS OF HEROIN EXHIBITS WITH UNKNOWN SIGNATURES

During 2011, the DEA Special Testing and Research Laboratory continued to identify a significant number of heroin samples classified as "Unknown." (Note: Since heroin is manufactured through a series of chemical processing steps, signature analysis is expected to result in a range of 4 to 7 percent Unknown samples). The percentage of Unknown samples increased from 13 percent in 2010 to 21 percent in 2011. This is the highest percentage of Unknowns analyzed through the HSP since initiation of the program. Signature analysis and confidential source reporting indicate the increase in Unknowns is likely a result of two possibilities: 1. White heroin produced in Mexico using a South American manufacturing method; and 2. Combining SA and MEX heroin. The Unknown samples were seized primarily in the eastern and Midwestern US where typically SA heroin dominates the market. Of the Southwest Border states, POEs in Texas appear to be the primary smuggling routes for Unknown samples with 18 exhibits, compared to 10 in Arizona, eight in California, and three in New Mexico.

Mexico

In 2011, the HSP identified Mexico as the primary source of heroin seized in the US. Mexico was identified as the geographic origin of 50 percent (by weight) of samples classified under the HSP during 2011. Compared to 2010 HSP data, there was an increase of 17 percentage points in samples classified as MEX heroin. The average purity of MEX heroin analyzed through the HSP in 2011 was 34 percent, an increase of one percentage point from 2010. The primary cutting agents found in MEX heroin exhibits analyzed in 2011 were lactose, sucrose, dextrose, and lidocaine.

In 2011, the number of MEX heroin exhibits increased to 360 exhibits from 227 exhibits in 2010. The total weight also increased to 732 kilograms from 356. The number of exhibits that exceeded 10 kilograms increased to 13 exhibits in 2011 from 6 exhibits in 2010.

HSP data indicate that MEX heroin trafficking through Arizona POEs increased in 2011. The number of MEX heroin exhibits seized at POEs in Arizona and analyzed through the HSP increased from 9 in 2010 to 42 in 2011. By comparison, POE seizures in Texas decreased from 32 in 2010 to 6 in 2011, while POE seizures in California more than doubled from 44 in 2010 to 89 in 2011.

The number of MEX heroin exhibits seized at US POEs has increased steadily since 2001. Table 2 summarizes the number and purity of MEX heroin exhibits seized at US POEs from 2001 to 2011.

TABLE 2: CHARACTERISTICS OF MEXICAN HEROIN SEIZED AT U.S. PORTS OF ENTRY AND ANALYZED THROUGH THE DEA HEROIN SIGNATURE PROGRAM

Calendar Year	Number of Exhibits	Average Purity
2001	34	30.95
2002	26	32.81
2003	20	37.90
2004	24	41.47
2005	40	49.39
2006	32	44.62
2007	49	38.55
2008	61	43.96
2009	55	39.60
2010	88	38.10
2011	145	40.40

HSP data indicate that MEX heroin remains strongest in markets west of the Mississippi River; however, MEX heroin exhibits seized in Alabama (1 exhibit), Florida (1 exhibit), Georgia (1 exhibit), Illinois (3 exhibits), Indiana (5 exhibits), Maryland (2 exhibits), Michigan (6 exhibits), New York (1 exhibit), North Carolina (9 exhibits), Ohio (15 exhibits), Virginia (1 exhibit), and West Virginia (1 exhibit) indicate a possible eastward expansion of MEX heroin trafficking. In addition to the exhibits analyzed through the HSP, DEA investigative reporting indicates that MEX heroin seizures are increasing in areas east of the Mississippi River.

South America

From 1995 until 2010, SA heroin was the main source of heroin in the US. However, between 2010 and 2011, SA heroin analyzed through the HSP decreased 10 percentage points in weight, from 53 to 43 percent. The purity of SA heroin increased three percentage points, from 50 percent to 53 percent. The primary cutting agents found in SA heroin exhibits analyzed in 2011 were diltiazem, caffeine, lactose, and mannitol.

While the weight of SA heroin exhibits increased from approximately 579 kilograms in 2010 to 633 kilograms in 2011, the representation of SA heroin exhibits by weight decreased from 53 percent in 2010 to 43 percent in 2011. This corresponds with the increase in the weight of MEX heroin exhibits analyzed through the program. In 2011, the weight of MEX heroin exhibits analyzed through the HSP increased to 732 kilograms from approximately 356 in 2010. Consequently, the representation of SA heroin in the program decreased, while the representation of MEX heroin increased.

SA heroin is smuggled commonly into the US by couriers on commercial flights. The major airports in New York, Miami, and Newark remain the primary arrival points for SA heroin couriers, with John F. Kennedy (JFK) International Airport in New York, the most common arrival point. Of the 99 SA heroin exhibits seized at US airports and analyzed through the HSP, 66 were seized at the JFK International Airport. HSP data indicate that air couriers smuggling SA heroin to the US frequently departed on flights from the Dominican Republic, Ecuador, Colombia, Guatemala, and Panama.

The number of exhibits and purity of exhibits seized at US POEs of SA heroin has remained relatively stable since 2005. Table 3 summarizes the number and purity of SA heroin exhibits seized at US POEs from 2001 through 2011.

TABLE 3: CHARACTERISTICS OF SOUTH AMERICAN HEROIN SEIZED AT US PORTS OF ENTRY AND ANALYZED THROUGH THE DEA HEROIN SIGNATURE PROGRAM

Calendar Year	Number of Exhibits	Average Purity
2001	412	81.16
2002	376	76.93
2003	350	77.05
2004	237	72.50
2005	185	67.98
2006	138	61.95
2007	126	64.30
2008	141	64.70
2009	134	61.90
2010	128	54.50
2011	150	61.80

In addition to air transport, heroin traffickers continued to smuggle SA heroin over land into the US through Mexico. In particular, HSP data indicate that POEs in California were the primary routes for SA heroin trafficking. Specifically, 16 exhibits of SA heroin from seizure events in California were analyzed through the HSP in 2011. SA heroin seizures through POEs in Arizona increased from eight exhibits in 2010 to 14 exhibits in 2011. Table 4 summarizes the number and geographic origin of heroin exhibits seized at POEs along the Southwest Border in 2010 and 2011.

TABLE 4: SOUTH AMERICAN AND MEXICAN HEROIN SEIZED AT SOUTHWEST BORDER PORTS OF ENTRY

Southwest border State	Mexican Heroin (Number of Exhibits)		South American Heroin (Number of Exhibits)	
	2010	2011	2010	2011
California	44	89	13	16
Arizona	9	42	8	14
New Mexico	1	0	0	0
Texas	32	6	14	7

Southwest Asia

SWA heroin accounted for seven percent of the heroin analyzed (by weight) under the HSP, which is a decrease from 14 percent in 2010. Despite the decrease from 2010 to 2011, seven percent is an increase compared to the levels reported in recent years, which were between three and five percent. The purity of SWA heroin decreased from 40 percent in 2010 to 39 percent in 2011.

SWA heroin continues to be smuggled to the US, primarily through couriers on international flights and through the international mail system. Air couriers often arrived at JFK International Airport, on flights that originated in Western Europe and West Africa.

SWA heroin seized at US airports from couriers and analyzed through the HSP in 2011 ranged in weight from approximately 25 grams to 11 kilograms. Each of the SWA heroin exhibits shipped through the international mail system ranged in weight from 164 grams to 11 kilograms. SWA heroin exhibits shipped through the mail were concealed in a variety of products including wooden elephants, ribbons, and garments. SWA heroin exhibits often were mailed from India and Pakistan, and were destined for Chicago, New Jersey, New York, and Washington, DC.

Southeast Asia

For the third consecutive year, no SEA heroin exhibits were analyzed in 2011 through the HSP. In 2008, one exhibit was analyzed, which consisted of approximately 258 grams of heroin seized as part of a DEA investigation in New York. Intelligence reporting indicates that the significant decrease in SEA heroin trafficking to the US is attributed to multiple factors, including decreased opium poppy cultivation in Southeast Asia, increased involvement of Southeast Asian drug trafficking organizations in the production and trafficking of synthetic drugs, and law enforcement efforts targeting SEA heroin trafficking organizations.

Outlook

For the first time in 24 years, the HSP has identified Mexico as the primary source of heroin available in the US, although Colombia remains a major source of supply. The high percentage of MEX heroin and the increased percentage of Unknown samples indicate that Mexican drug trafficking organizations have expanded their heroin distribution operations in the US. In addition to the HSP, investigative intelligence indicates that Mexican DTOs are involved increasingly in white heroin trafficking, which has led to their expanded heroin distribution east of the Mississippi, areas historically dominated by Dominicans and Colombians distributing SA heroin.

Despite record estimates of opium and heroin production in Afghanistan, the HSP statistics indicate continued limited availability of SWA heroin in the US. It is likely that the US will remain a secondary market for Asian-sourced heroin as investigative intelligence and the HSP data indicate that SWA and SEA heroin trafficking networks are not challenging the well-established trafficking organizations that distribute SA and MEX heroin in the US. Without such networks in place, the availability of SWA and SEA heroin in the US will likely continue to be limited.

The DEA will continue to monitor the characteristics of heroin seized in the US, as well as heroin trafficking patterns, to better understand the nature of the US heroin market.

This report was prepared by the DEA's Indicators Program Unit of the Indications and Warning Section. This report reflects information current as of December 2012. Comments are welcome and may be addressed to the Indications and Warning Section at (202) 307-4358. Requests for copies may be emailed to the Intelligence Production Unit, Intelligence Division, DEA Headquarters, at IntellProduction@usdoj.gov

APPENDIX A: HEROIN SIGNATURE PROGRAM RESULTS (1977-2011)
GEOGRAPHIC SOURCE AREA DISTRIBUTION (IN PERCENT*)
BASED ON NET WEIGHT OF HEROIN SEIZED AND ANALYZED

Year	Mexico	Southeast Asia	Southwest Asia	South America
2011	50	0	7	43
2010	33	0	14	53
2009	34	0	4	62
2008	38	<1	3	59
2007	25	<1	5	70
2006	20	0	4	76
2005	14	4	13	69
2004	14	3	14	69
2003	3	<1	8	88
2002	9	1	10	80
2001	30	7	7	56
2000	17	8	16	59
1999	24	10	6	60
1998	17	14	4	65
1997	14	5	6	75
1996	20	8	20	52
1995	5	17	16	62
1994	5	57	6	32
1993	8	68	9	15**
1992	10	58	32	—
1991	21	58	21	—
1990	21	56	23	—
1989	27	56	17	—
1988	29	46	25	—
1987	42	25	33	—
1986	42	22	36	—
1985	39	14	47	—
1984	32	17	51	—
1983	33	19	48	—
1982	34	14	52	—
1981	36	10	54	—
1980	38	11	51	—
1979	48	13	39	—
1978	82	15	3	—
1977	89	9	2	—

* Percentage based on samples for which a signature was identified. From 1977 through 1991, percentages were based on the number of samples tested. Since 1992, percentages have been based on the net weight of the heroin seized and analyzed.

** The signature for heroin from South America was developed in July 1993; therefore, this figure represents only partial-year data. (DEA reporting indicate that heroin from Colombia first was noted in the US in 1991 and that its availability increased during the latter half of 1992 as well as in early 1993.)

Note: The dominant source area is indicated in **bold**. From 1977 through 1991, percentages were based on the number of samples tested. Since 1992, percentages have been based on the net weight of the heroin seized and analyzed.

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