

**National Institute of Justice**

*Office of Investigative and Forensic Sciences*

Final Reports Submitted Under NIJ's Convicted Offender DNA Backlog Reduction  
Program (In-House Analysis and Review)

July 2012

This document presents final grant reports submitted to the U.S. Department of Justice. These reports have not been published by the Department. Opinions or points of view expressed are those of the authors and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

## **FY09 Convicted Offender Final Reports**

This table is a summary of DNA Convicted Offender Awards issued in FY2009. Following this table are their respective Final Reports.

FY09 Recipient Name	Award Number	Award Amount
<a href="#">Alaska Department of Public Safety</a>	2009-DN-BX-K023	\$387,500
<a href="#">Arkansas State Crime Laboratory</a>	2009-DN-BX-K024	\$43,900
<a href="#">Arizona Department of Public Safety</a>	2009-DN-BX-K030	\$1,617,214
<a href="#">California Department of Justice</a>	2009-DN-BX-K019	\$463,348
<a href="#">Georgia Bureau of Investigation</a>	2009-DN-BX-K102	\$365,303
<a href="#">Kansas Bureau of Investigation</a>	2009-DN-BX-K037	\$736,867
<a href="#">Commonwealth of Kentucky</a>	2009-DN-BX-K114	\$657,688
<a href="#">Louisiana State Police</a>	2009-DN-BX-K026	\$1,050,683* <sup>1</sup>
<a href="#">Massachusetts State Police</a>	2009-DN-BX-K018	\$81,252
<a href="#">Mississippi Department of Public Safety</a>	2009-DN-BX-K029	\$1,015,975
<a href="#">North Dakota</a>	2009-DN-BX-K017	\$70,840
<a href="#">Las Vegas Metropolitan Police Department</a>	2009-DN-BX-K025	\$102,025
<a href="#">Washoe County Sheriff's Office</a>	2009-DN-BX-K042	\$196,030
<a href="#">Oregon State Police</a>	2009-DN-BX-K013	\$136,000
<a href="#">Pennsylvania State Police</a>	2009-DN-BX-K015	\$429,887
<a href="#">Instituto de Ciencias Forenses</a>	2009-DN-BX-K213	\$262,500
<a href="#">South Dakota Office of The Attorney General</a>	2009-DN-BX-K028	\$161,700
<a href="#">State of Texas</a>	2009-DN-BX-K021	\$503,885
<a href="#">Utah Department of Public Safety</a>	2009-DN-BX-K022	\$564,000
<a href="#">Virginia Department of Forensic Science</a>	2009-DN-BX-K020	\$171,579
<a href="#">Vermont Department of Public Safety</a>	2009-DN-BX-K016	\$79,896
<a href="#">Wyoming Office of the Attorney General</a>	2009-DN-BX-K103	\$80,000
<b>TOTAL FUNDING</b>		<b>\$9178072</b>

**FY09 Recipient Name:** Alaska Department of Public Safety

**Award Number:** 2009-DN-BX-K023

**Award Amount:** \$387,500

**Final Report:** Funds from this award were to be used for analysis of convicted offender and arrestee DNA samples for entry into CODIS. With this award, the laboratory has eliminated the backlog of these samples.

All funds from this award were exhausted prior to this reporting period. In determining analyses funded under a particular award, the laboratory tracks lot numbers for PP16 primer, AmpliTaq Gold polymerase and M48 kits (magnetic beads).

In the grant application, the laboratory committed to analysis of 15,500 samples. The award was initially to end on 3/31/11, but was extended to allow for completion of the 15,500 samples. The

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<sup>1</sup> Shortly after receiving this award, the grantee received an unexpected award of state funds to deal with their backlog of convicted offender samples. To avoid any supplanting they requested that this award be closed and deobligated. Therefore, no funds were awarded to Louisiana State Police under the FY09 Convicted Offender Program.

laboratory has now completed the analysis of 15,587 samples, including QC samples (<10%). Of the 14,852 new profiles entered into CODIS, 14,475 were suitable for, and uploaded to NDIS.

The laboratory is still using reagents purchased under this award and anticipates being able to analyze an additional 2,000 samples with the remaining supplies. It is also anticipate that additional hits will occur to offender samples analyzed under this award, especially since the laboratory is now beginning to regularly process backlogged property crime casework.

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**FY09 Recipient Name:** Arkansas State Crime Laboratory

**Award Number:** 2009-DN-BX-K024

**Award Amount:** \$43,900

**Final Report:** The Goal is to utilize the Convicted Offender and/or Arrestee DNA Backlog Reduction Program FY 2009 to process the additional samples that will be submitted due to Arkansas new arrestee legislation as they are received by the laboratory.

Progress Oct. - Dec. 09 - The lab has only received 33 arrestee samples, and not the anticipated sample volume that was expected from the arrestee legislation. We are currently trying to discover why the expected number of samples are not being submitted and holding off from utilizing the funds until we can decide if they are necessary.

Progress Jan. - Jun. 10 - The lab has been receiving larger number of arrestee as agencies start to collect samples. We are continuing to educate the agencies and expect the number of samples to reach the anticipated levels by year's end.

Progress Jul. - Dec. 10 - All funds for the grant have been expended in March and April of 2010. This was in preparation for the increase of samples expected after educating the agencies. The sample number is still not at the level expected compared the arrest number provided by the agencies. We are continually in contact with the agencies to encourage the submission of samples. We are also in the process of trying to change the current law to include more qualifying offenses. We will be re-examining the data in March to determine if an extension will be necessary.

Progress Jan. - March 11 - Arrestee samples were still slow in being received. we processed an additional 35 arrestee samples during this period.

Final - Due to the fact that samples were slow to be received the grant funds were used to process Convicted Offender samples. During this time we developed a protocol to use half-reaction volumes on our database samples. This allowed us to process additional samples over the original number. We processed 3060 Convicted Offender samples with the kits that were purchased with the grant funds. These Convicted Offender samples resulted in 45 CODIS hits.

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**FY09 Recipient Name:** Arizona Department of Public Safety

**Award Number:** 2009-DN-BX-K030

**Award Amount:** \$1,617,214

**Final Report:** The Arizona Department of Public Safety Crime Laboratory was able to meet and exceed the goals of this grant as stated in the original grant request. Based on the backlog of DNA database samples at the State of Arizona, the DPS Crime Laboratory applied for and was awarded an FY09 grant to outsource 45,000 database samples. Over the lifetime of the grant AZ DPS was able to accomplish the following:

- 53,750 DNA samples were sent to an outsourcing laboratory for processing
- 53,750 DNA sample results, received from the outsourcing laboratory, were technically reviewed by AZ DPS DNA analysts, completing the allele calls and establishing the final DNA profiles
- 53,750 samples processed is 19% more than the original grant request to process 45,000 samples and was accomplished with significantly less funds.
- 1,150 of the DNA samples processed were quality control samples as required by the national DNA database guidelines
- 52,600 of the DNA samples processed were actual DNA database samples
- 51,832 of the DNA database samples yielded DNA profiles appropriate for uploading and searching at the combined DNA Index System (CODIS)
- 437 hits were recorded by the uploaded DNA database profiles against DNA profiles from casework samples in Arizona and other states. This equates to one hit for every 119 DNA database samples added to CODIS.
- 9 additional hits were recorded against the DNA database samples in the two months following the grant ending, April and May 2012. This demonstrates the on-going value in the future of this grant award.

AZ DPS submitted its original grant request with an estimated outsource cost of \$35.00 per sample, based on previous experience. However, DPS received a highly advantageous bid of \$19.17 per sample, a 55% cost savings.

AZ DPS received approval to send additional samples over and above the original 45,000 samples and sent an additional 8,750 samples. The extremely advantageous bid price allowed AZ DPS to process more samples at a cost savings. Therefore, AZ DPS de-obligated \$539,311.72 which can be potentially reallocated to other crime labs to reduce their DNA database backlogs.

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**FY09 Recipient Name:** California Department of Justice

**Award Number:** 2009-DN-BX-K019

**Award Amount:** \$463,348

**Final Report:** The target number of convicted offender / arrestee samples to process and upload utilizing this award was 30,000. The number of samples processed was 29,329. As of the end of the final reporting period, June 30, 2011, we have uploaded 26,823 of the processed samples to CODIS for searching at the state and national levels.

The amplification kit employed in this work, purchased with grant funds, was the Applied Biosystems Identifiler kit. During the course of 2009 our laboratory had begun to notice an increasing failure rate while processing samples using Identifiler; many of these failures were

due to poor efficiency in amplification. Samples were failing for low peak height. This was also the case in our use of the Identifiler kits (purchased with grant funds) during 2010. The original number of kits obtained with grant funding was 100. After our work under this award had consumed 80 of these kits, and based upon continuing communications with Applied Biosystems about our concerns about the quality of the Identifiler kits that we had received, including both grant-funded kits and kits purchased with our own funding, Applied Biosystems directed us to return the remaining 20 kits. These were replaced, at no additional cost to us, with 28 new kits from a different lot. These 28 kits were collectively deemed as grant-funded kits by us and all samples amplified with these kits were handled by us as grant-funded samples. That is, the technical and administrative review steps for these samples were done on overtime, paid for by grant funding from the award. Notwithstanding the extra eight kits, our overall results still did not meet the 30,000 target. In the meantime, Applied Biosystems has begun to market an improved version of their Identifiler kit, known as “Identifiler Plus” that is purported to overcome inhibition in data bank samples. We plan to use this kit in our next NIJ award-funded convicted offender / arrestee backlog reduction program (2010-DN-BX-K023).

The 142 hits reported in the performance metrics section is a “raw score” based on a query of our CODIS system and our hit tracking database “HTAC”. This number is consistent with our overall experience concerning the impact on numbers of hits when adding offenders to the database. The number of hits generated is typically between 0.5 and 2 percent of the number of offenders added. In this instance the number of hits is slightly over the lower end of the range, 0.5 percent.

We were able to obtain additional information concerning the type of crime from which the forensic unknown profile was derived in 128 of the cases through the use of the Cold Hit Outcome Project (CHOP) data supplied by our participating California CODIS laboratories. Tables of this information and pie charts illustrating the tables are attached. It is important to recognize that this sample of 128 cases is statistically rather small, much less than our historical total of over 15,000 hits; therefore, the significance of the proportions of crime types should not be overstated. What is clear is that the primary crime types in this small sample are sexual assaults and burglaries. The latter category is indicative of the generalization of the use of DNA evidence in criminal investigation and the tendency for burglars to leave useful DNA samples in the course of their activities at crime scenes.

Additionally, through research and contact with law enforcement agencies identified through CHOP we were able to gather seventeen anecdotal success stories providing evidence that the mission of the award has been served by the uploading of offenders who have been connected with crimes. These anecdotes are attached in a summary document.

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**FY09 Recipient Name:** Georgia Bureau of Investigation

**Award Number:** 2009-DN-BX-K102

**Award Amount:** \$365,303

**Final Report:** Goals and Objectives

**Goal 1:** Complete analysis of 13 core STR loci for 16,650 13,940 (GAN004) offender samples.

**Progress Oct – Dec, 2009:** During this performance period, the GBI laboratory completed the

13 locus STR analysis of 12,127 convicted offender samples. All of these analyses were completed using supplies purchased with state funding. The backlog of samples at the beginning of the award period, Oct 1, 2009 was 695 samples over 30 days old. At the end of this reporting period the backlog of samples was 16. The GBI received 9,766 offender samples for DNA analysis during this reporting period.

Progress Jan – Jun, 2010: During this performance period, the GBI laboratory completed the 13 locus STR analysis of 9,919 convicted offender samples. All of these analyses were completed using supplies purchased with state funding. The backlog of samples at the beginning of the award period, Oct 1, 2009 was 695 samples over 30 days old. At the end of this reporting period the backlog of samples was 8. The GBI received 9,810 offender samples for DNA analysis during this reporting period.

Progress Jul – Dec, 2010: During this performance period, the GBI laboratory completed the 13 locus STR analysis of 8,629 convicted offender samples. All of these analyses were completed using supplies purchased with state funding. The backlog of samples at the beginning of the award period, Oct 1, 2009 was 695 samples over 30 days old. At the end of this reporting period the backlog of samples was 8. The GBI received 9,360 offender samples for DNA analysis during this reporting period.

Progress Jan - Jun, 2011: During this reporting period, the GBI laboratory completed the 13 locus STR analysis of 6,873 convicted offender samples using funding from this award. A project scope GAN (#004) was approved adjusting the number of samples to be analyzed with award funds to 13,940 as a result of budget reallocations to accommodate salary/benefits for two scientists within this work unit. Also during this reporting period a project period GAN (#005) was approved to extend the project period to 3/31/2012 and a budget modification GAN (#006) was approved.

During this reporting period the award funds were used to purchase the supplies necessary to analyze 6,873 samples. The supplies purchased included STR kits, extraction kits, capillaries, tubes and other routine supplies used in offender DNA analysis. The counting of samples processed using award funds started on Feb 1, 2011 and is tracked using a data field within the LIMS for each sample. Prior to that date supplies had been purchased with available state funds. Also during this reporting period, the budget modification (#006) re-allocated some of the funding to pay salary/benefits for one of the analysts assigned to this work – previously she had been paid from the FY2009 Casework Backlog award. Because the analyst is using award funded supplies to perform the analysis, only the samples analyzed with supplies are counted. At the end of this reporting period the backlog of samples was 9. The GBI received 8,820 offender samples for DNA analysis during this reporting period. A number of these samples were analyzed with available state funding.

Progress Jul - Dec, 2011: There is a correction to the number of samples completed in the Jan-Jun, 2011 progress report.

The corrected number is 7,160. It was discovered that some of the data fields used for identifying which grant award were used to fund the analyses had not been updated at the time that progress report was filed.

During this reporting period, the GBI laboratory completed the 13 locus STR analysis of 8,134 convicted offender samples using supplies (STR kits, extraction kits, capillaries, tubes and other routine supplies used in offender DNA analysis) purchased with funding from this award. All funds from this award were expended during this reporting period. Supplies purchased during this reporting period are shown in the table below. There are two analyst positions funded by this

award. One of the two analysts was in training during this entire reporting period. The second used only award funded supplies to complete sample analysis, therefore no additional metrics related to the capacity provided by this award are included.

Description Quantity Description Quantity Description Quantity

- Identifiler kits 14 QiaAmp Extraction kit 7
- 50 ml falcon
- tubes 1
- 10X buffer 4 50 ul filter tips 7 Kimwipes 2
- 96 well reaction plate 20 Filter tips 14 Ethanol 2
- POP4 16 EZ1 extraction kit 6 Pipet tips 2
- 96well septa strip 5 Formamide 6 Alcohol spray 1
- Buffer tray septa strip 7 Capillary array 2
- LIZ standard 12 S blocks 2
- Taq Gold 1
- EZ1 Advanced XL
- DNA Investigator card 1
- 24 well microamp base 2 50 ml falcon tubes 1

Final Report: Over the period of this award, the GBI laboratory completed the 13 locus STR analysis of 15,293 convicted offender samples using supplies (STR kits, extraction kits, capillaries, tubes and other routine supplies used in offender DNA analysis) purchased with funding from this award. One sample previously thought to have been analyzed using funding from this award was incorrectly assigned. All funds from this award have been expended. A comprehensive listing of supplies purchased using award funds are shown in the table below. There are two analyst positions funded by this award. All sample analysis completed by these analysts utilized award funded supplies, therefore no additional metrics related to the capacity provided by this award are included.

Description Quantity

- 10X buffer 12
- 96 well reaction plate 45
- 96 well septa strip 15
- Adhesive entryway mat 1
- Aluminum sealing tape 4
- Buffer tray septa strip 9
- Capillary array 4
- Conical tubes, 1.5 ml 2
- Decon alcohol 1
- Detergent 1
- Digital thermometer 1
- Disposable filter tips, 1100 ul 20
- Disposable filter tips, 50 ul 9
- Ethanol 2
- EZ1 DNA Investigator extraction kit 19
- Falcon tubes 50 ml 1

- Filter tips, 20 ul 15
- Formamide 11
- Gloves 2
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- GBI Crime Lab
- Identifiler kit 44
- Kimwipes 3
- Lab coats 1
- LIZ standard 24
- Markers 2
- Matrix dye set 1
- Microporous sleeve 2
- PCR reaction tubes 3
- Pipette tips 0.1 - 20 ul 1
- Pipette tips 1-40 ul 1
- POP 4 for 31xx genetic analyzer 61
- QiaAmp 96 DNA swab Biorobot extraction kit 15
- Reagent reservoir 2
- S block 5
- Tape dispenser 2
- Taq Gold 8

#### GOAL COMPLETED

Goal 2: Enter DNA profiles into CODIS within 30 days of completion of analysis.

Progress Oct – Dec, 2009: Of the 12,127 offender DNA profiles completed during this reporting period, 11,463 or 94.5% were entered into CODIS within 30 days of the completion of the analysis during this reporting period. For the last three months of the reporting period (Oct – Dec, 09), this percentage increased to 95.9%. This data was obtained using the Crystal Report ‘30 day CODIS goal’.

Progress Jan – Jun, 2010: Of the 9,919 offender DNA profiles completed during this reporting period, 9,919 or 100% were entered into CODIS within 30 days of the completion of the analysis during this reporting period. This data was obtained using the Crystal Report ‘30 day CODIS goal’.

Progress Jul – Dec, 2010: Of the 8,629 offender DNA profiles completed during this reporting period, 8,621 or 99.9% were entered into CODIS within 30 days of the completion of the analysis during this reporting period. This data was obtained using the Crystal Report ‘30 day CODIS goal’.

Progress Jan - Jun, 2011: All 6,873 profiles generated using award funds were entered into CODIS within 30 days of analysis completion.

Progress Jul - Dec, 2011:

There is a correction to this metric for the Jan – Jun, 2011 reporting period for the same reason given above under Goal 1. The corrected number is 7160 profiles entered within 30 days or 99.96%.



8133 (99.99%) were entered into CODIS within 30 days of analysis completion during this reporting period. This data was obtained using the Crystal Report '30 day CODIS goal'.  
Final Report: A total of 15,293 DNA profiles from convicted offenders were entered into CODIS as a result of supplies funded by this award. 99.97% of the profiles were entered into CODIS within 30 days of analysis completion.

#### GOAL COMPLETED

Goal 3: Search CODIS, identify possible 'hits' to unsolved cases and then confirm offender DNA profiles prior to agency notification.

Progress Oct – Dec, 2009: During this reporting period a total of 243 hits to state offenders were identified and confirmed. None of these hits would have been attributable to funding from this award since no samples have been analyzed using award funds during this reporting period.

Progress Jan – Jun, 2010: During this reporting period a total of 248 hits to state offenders were identified and confirmed. None of these hits are attributable to funding from this award since no samples have been analyzed using award funds during this reporting period.

Progress Jul – Dec, 2010: During this reporting period a total of 217 hits to state offenders were identified and confirmed. None of these hits are attributable to funding from this award since no samples have been analyzed using award funds during this reporting period.

Progress Jan - Jun, 2011: There were 73 CODIS hits identified from the 6,873 profiles entered during this reporting period. Of the 73 hits, 67 were from Georgia cases and 6 were national hits.

Progress Jul - Dec, 2011: 113 CODIS hits were identified during this reporting period from the 15,294 offender DNA profiles that have been developed as a result of funding from this award. The number of CODIS hits attributed to the samples analyzed with funding from this award is maintained by the CODIS administrator on a spreadsheet.

Final Report: 192 cumulative CODIS hits were identified involving samples analyzed as a result of funding from this award. 168 of the CODIS hits were to Georgia cases, with an additional 24 hits from other states to these Georgia offenders. The number of CODIS hits attributed to the samples analyzed with funding from this award is maintained by the CODIS administrator on a spreadsheet.

#### Performance Metric Discussion: FINAL REPORT

The backlog of offender samples is obtained from the GBI Laboratory Information Management System and is based upon the number of samples where the analytical service has not been released (completed) within 30 days of submission. This data is maintained in monthly laboratory statistical reports. At the start of the award on Oct 1, 2009, the number of samples in backlog was 695. As of the end of any activity involving this award, March 1, 2012, the number of samples in backlog was 95. The total number of samples completed (15,293) exceeded the

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**FY09 Recipient Name:** Kansas Bureau of Investigation

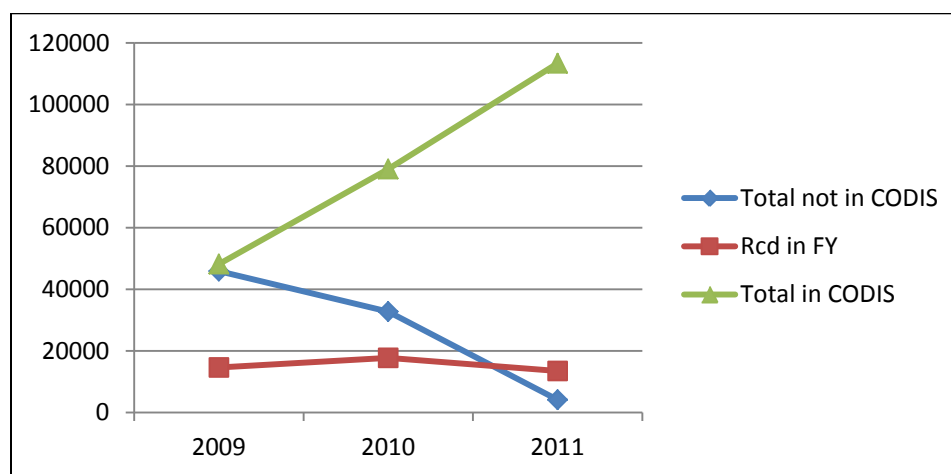
**Award Number:** 2009-DN-BX-K037

**Award Amount:** \$736,867

**Final Report:** The FY2009 grant for the backlog of convicted offender samples has been instrumental in the success of the databank unit. During the life of this grant, a total of 28,800 samples were examined. This has resulted in all 28,800 samples being entered into the CODIS network.

A grand total of 663 hit verification reports were written. The timeliness of the CODIS matches are now such that the casework analysts are getting matches to the arrestee sample submitted. CODIS matches have been made to serial rapists; a homicide case matched to an individual whose qualifying offense was drugs; burglaries where the qualifying offence was a DUI. All of which shows how powerful of a tool the CODIS system can be.

This graph shows the extraordinary work done when scientists and technicians are given the resources to accomplish the goal. The numbers are as of June 29, 2011 and represent the fiscal years which begin in July and end the following June. So, for FY2009 the dates are from July 1, 2008 to June 30, 2009 and the FY2010 would be from the first of July 2009 to the end of June 2010 and lastly the FY2011 would encompass the time from July 1, 2010 to June 29, 2011.



This extraordinary accomplishment was due to the diligence of six individuals, each of whom had a very important job. Two were responsible for the accessioning of all the samples and reconciling any discrepancies that may occur. Historically, the databank has between 8 and 10% duplication of samples. Each of those samples need to be determined if there is a viable sample present and then that the collection reason was valid. Three and half scientists were responsible for the running of the samples and technically review the work. One of those scientists had the added responsibilities of technical leader and another was the state administrator for CODIS. Through the vision of these individuals and the appropriate resources, the scientists were able to develop a process that successfully analyzed the samples and an expert system to aid in the interpretation of profiles. There was one part-time position whose responsibility was to check the arrest records against the samples received and make the necessary phone calls to ensure compliance. All of this was done with a change over in the database used to accession the samples and currently a move toward making the process that much more accessible to all booking agencies across the state.

This grant was instrumental in supplying the necessary chemicals, supplies and overtime to achieve this benchmark.

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**FY09 Recipient Name:** Commonwealth of Kentucky

**Award Number:** 2009-DN-BX-K114

**Award Amount:** \$657,688

**Final Report:** *This project is still in progress*

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**FY09 Recipient Name:** Louisiana State Police

**Award Number:** 2009-DN-BX-K026

**Award Amount:** \$1,050,683

*\*Please note that shortly after receiving this award, the grantee received an unexpected award of state funds to deal with their backlog of convicted offender samples. To avoid any supplanting they requested that this award be closed and deobligated. Therefore, no funds were awarded to Louisiana State Police under the FY09 Convicted Offender Program.*

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**FY09 Recipient Name:** Massachusetts State Police

**Award Number:** 2009-DN-BX-K018

**Award Amount:** \$81,252

**Final Report:** The Massachusetts State Police Forensic Services Group (MSPFSG) maintains the Combined DNA Index System (CODIS) database for the state. Approximately 800 new convicted offender samples are collected monthly. These samples are collected by the CODIS Collection and Investigative Unit (CCIU) at the MSPFSG and then processed in the DNA Unit for entry into the CODIS database.

The Massachusetts State Police Forensic Services Group had the following goals and objectives set for this award:

1. Contract with temporary employees to prepare convicted offender samples for testing.
2. Test all convicted offender samples in-house.
3. Use in-house DNA analysts to review convicted offender data.

Due to the support and resources provided through this award, the convicted offender sample backlog was eliminated by July 2010. In addition, the MSP DNA Unit was able to build an infrastructure that has allowed the Unit to keep ahead of the backlog and test the convicted offender samples in a real-time fashion.

At the beginning of this award period there was a backlog of 5,644 convicted offender samples. Through the use of this funding the MSPFSG was able to eliminate this backlog ahead of schedule. This has been a long term goal of the MSP FSG and its accomplishment is in part due to the significant assistance provided by the NIJ Convicted Offender Backlog Reduction programs.

#### Goal 1: Contract Technicians

This grant provided CCIU with two temporary employees who proved to be invaluable in handling our Convicted Offender workload. These temporary employees performed various operations in CCIU such as appointment scheduling, checking offender qualifications, and data entry into a centralized database application. By performing these duties, the Laboratory Technicians were able to prepare existing DNA samples for testing and to continue performing

DNA sample collections. The use of these support personnel was central to the goal of reducing and eventually eliminating the convicted offender sample testing backlog.

Goal 2: Convicted Offender Sample Testing

All convicted offender samples prepared by the technicians employed under this grant were tested in-house.

Goal 3: Review of Convicted Offender Testing Data

All convicted offender samples tested in-house under this grant were reviewed in-house by qualified DNA analysts prior to upload to National DNA Index System.

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**FY09 Recipient Name:** Mississippi Department of Public Safety

**Award Number:** 2009-DN-BX-K029

**Award Amount:** \$1,015,975

**Final Report:** The objective set for this award was to accomplish the analysis and review of DNA database samples collected by the state from convicted offenders in order to provide timely CODIS-compatible data for State and national DNA databases and to significantly reduce the number of DNA database samples in the backlog. This objective is being achieved by contracting with an accredited fee-for-service vendor, Orchid Cellmark, to conduct DNA analyses and utilizing existing qualified laboratory DNA analysts working overtime to conduct data review of the DNA database profiles generated by Orchid Cellmark.

- Progress Oct-Dec 09 – MCL is experiencing delays with the contract with the vendor lab, Orchid Cellmark. We were ready to send CO samples to them when they contacted us to ask for clarification about the technical specifications in the RFP where we had required a 3130 platform. They wanted to use the 3100 instead even though they had submitted a bid based on the 3130 specifications. They were told that that was not acceptable. They then said that they would upgrade their 3100 to a 3130 and informed us that the Nashville Lab would be closing in June and all Nashville Operations would be moving to Dallas. The current plan is for ABI to install the 3130 upgrade and have the validation complete by February 5. After February 8, the MCL Bioscience Technical Leader will make a site visit to the Nashville lab to see the agency and view the new validation data. A test batch of samples will be done after the site visit.  
The Nashville Representative agreed that all samples that we send each month from now until May must be completed and returned that month including retesting and return. We will be sent an addendum to the contract reflecting this agreement.  
In June a site visit will be made to the Dallas lab and Dallas will become our testing site.
- Progress Jan –June 10 - The relocation of the Orchid Cellmark Laboratory from Nashville to Dallas has resulted in delays in reducing the backlog of convicted offender samples.  
The MCL Bioscience Technical Leader has made site visits to the Nashville lab and to the Dallas lab. A batch of 250 test samples has been analyzed in the Nashville lab and a second batch of 250 test samples has been analyzed in Dallas. In July Dallas will become our testing site.

As a result of a massive effort to complete the sampling of the prison population and parolees, 19,500 samples were added to the backlog of convicted offender samples. MCL staff worked overtime receiving, documenting and preparing these samples to be sent to the vendor laboratory. MCL had planned to charge these overtime wages and fringe benefits to the grant. However, we learned that we had misinterpreted what overtime expenses the grant would pay. In keeping with the requirements of the grant, only overtime hours spent reviewing DNA profiles from the vendor laboratory will be charged to the grant, all other overtime is being paid from another source.

At the end of June, 14,500 samples had been sent to Orchid Cellmark. 1,976 have been returned, none of which have been reviewed. No profiles have been uploaded to CODIS.

- Progress July–Dec 01 – In this reporting period an additional 9,500 samples were sent to Orchid Cellmark and another 7,502 are ready to be sent. At the end of the reporting period, the number of DNA database samples analyzed as a result of this award was 12,212, the number of DNA profiles uploaded to CODIS as a result of this award was 12,816 and the number of CODIS hits that occurred as a result of this award was 22. Because there are only six DNA analysts in the MCL system qualified to conduct data review of the DNA database profiles generated by Orchid Cellmark data review of the DNA database profiles generated by Orchid Cellmark, the review process is slow. It will be necessary to request an extension of the project period in order to achieve the objective of the project.
  
- Progress Jan – June 11 – The majority of the funds that were originally requested in the Personnel and Fringe Benefits categories for overtime payments were disallowed for the use that was proposed. This made it necessary to request a budget adjustment to move funds from the Personnel and Fringe Benefits Categories to Contractual Services to fund the analysis of additional database samples collected by the state from convicted offenders. A Budget adjustment was requested and received Final Approval on 05/04/2011.  
Orchid Cellmark has been paid a total of \$759,423 through April. Invoices for April (\$20,300) and May (\$175,508) are in the process of being paid. The adjusted amount Budgeted to Contractual Services is \$986,275. A balance of \$31,044 will remain which will be used to pay for the samples now awaiting analysis at Orchid Cellmark.  
Using grant funds for overtime work, data review of the DNA database profiles generated by Orchid Cellmark is progressing satisfactorily.
  
- Final Progress Report  
The cumulative expenditures for the entire grant period, October 1, 2009 to September 30, 2011 are as follows:
  - \$988,440 was paid to Orchid Cellmark Inc. for Forensic DNA analysis of Convicted Offender database samples. This represents the analysis of 34,084 DNA base samples analyzed as a result of this award.
  - \$27,535 Five DNA analysts worked overtime reviewing the Convicted Offender database profiles from Orchid Cellmark. This \$27,535 includes overtime wages of \$25,578 plus the fringe benefit social security match of \$1,957.

The cumulative number of DNA base samples analyzed as a result of the award for the entire grant base periods was 34,084.

The cumulative number of DNA profiles uploaded to CODIS as a result of the award for the entire grant base periods was 32,015.

The cumulative number of CODIS hits that occurred as a result of the award for the entire grant base periods was 81.

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**FY09 Recipient Name:** North Dakota

**Award Number:** 2009-DN-BX-K017

**Award Amount:** \$70,840

**Final Report:** The primary goal of the Convicted Offender and Arrestee Backlog Reduction Program is to reduce the backlog of Convicted Offender and Arrestee Samples; this will be accomplished by completing two objectives:

Objective 1: The DNA section of the crime laboratory will process at least 2,024 offender samples with the funding available.

Objective 2: After data is analyzed the profiles will be expeditiously uploaded to the Combined DNA Index System (CODIS).

The beginning performance metrics need to be corrected on this grant report due to a transcription error. At the beginning of the award the number of backlogged offender samples should be 1,531 samples. The first grant report has 971 samples recorded, the correct metric should be recorded as 1,531 samples.

Total number of profiles uploaded into CODIS:

10/01/2009 to 12/31/2009 1 profile (Other Funding Source)

- No funds have been drawn down on this grant during this reporting period. One sample was processed and analyzed, and the profile was uploaded into CODIS. The funding for this sample can be attributed to a different funding source.

01/01/2010 to 06/30/2010 4 profiles (Other Funding Source)

- During this time period, the laboratory used less than five percent of the funding. No profiles were uploaded into CODIS that can be attributed to this funding source.
- Four samples were processed and analyzed, and the profiles were uploaded into CODIS. The funding for these samples can be attributed to a different funding source

07/01/2010 to 12/31/2010 2,910 profiles = 1,147(2009 Grant) + 1,763(Other Funding Source)

- During this reporting period the funding was used to purchase consumables, DNA-IQ reaction kits, quantitation kits, and nine profiling kits.
- The total number of samples analyzed and profiles uploaded to CODIS that can be attributed to this grant is 1,147. The remaining 1,763 samples were processed using funding from a different source.
- Eight CODIS hits can be attributed to this funding source during this time period.

01/01/2011 to 06/30/2011 2,440 profiles (2009 Grant)

- During this reporting period the funding was used to purchase consumables, DNAIQ reaction kits, quantitation kits, and four profiling kits.

- The number of samples analyzed and profiles uploaded to CODIS that can be attributed to this grant is 2,440.
- Sixteen CODIS hits can be attributed to this funding source during this time period.

07/01/2011 to 09/30/2011 560 profiles (2009 Grant)

- During this reporting period the funding was used to purchase consumables and quantitation kits.
- The number of samples analyzed and profiles uploaded to CODIS that can be attributed to this grant is 560.
- Four CODIS hits can be attributed to this funding source during this time period.

The total number of samples analyzed and profiles uploaded into CODIS that can be attributed to this grant equals 4,147. The total number of samples analyzed and profiles uploaded into CODIS during this grant period equals 5,915 profiles. 1,768 samples/profiles were analyzed using a different funding source.

The cumulative number of CODIS hits that have occurred as a result of funding from this grant is 28.

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**FY09 Recipient Name:** Las Vegas Metropolitan Police Department

**Award Number:** 2009-DN-BX-K025

**Award Amount:** \$102,025

**Final Report:**

GOAL 1: Overtime funds will be used to reduce the number of convicted offender/sexual registrant samples in the backlog. DNA samples will be tracked through analyses and profiles will be entered into CODIS.

Objective 1: The Laboratory will report the number of DNA database samples awaiting DNA analysis at the beginning of the award period.

Objective 2: The Laboratory will process, track and report the total number of DNA database samples analyzed with 2009 Convicted Offender/Arrestee Backlog Reduction funds.

Objective 3: The Laboratory will process, analyze and report the number of DNA profiles entered into CODIS with 2009 Convicted Offender/Arrestee Backlog Reduction funds.

Objective 4: The Laboratory will track and report the number of CODIS hits from profiles developed with 2009 Convicted Offender/Arrestee Backlog Reduction Funds.

Progress 01 October - 31 December 2009: Overtime to process these samples will be utilized in the next reporting period (see “General Comments 01 October - 31 December 2009” for details). Goal 1 and Objectives 1 – 4 are still pending.

Progress 01 January – 30 June 2010: The LVMPD tracked and reported all required objectives during this reporting period. The LVMPD analyzed 735 samples out of 2,915 convicted offender samples during the life cycle of this grant. The LVMPD has a minimum of 2,180 samples left to analyze through March 2011, and is on-target to meet this goal. Completion of Goal 1 is ongoing.

Progress 01 July – 31 December 2010: The LVMPD tracked and reported all required objectives during this reporting period. The LVMPD analyzed 621 samples out of 2,915 convicted offender samples during the life cycle of this grant. The LVMPD has a minimum of 1,559 samples left to analyze through March 2011. In the next reporting period the Biology/DNA Detail will request a 3-month extension of the grant to ensure the LVMPD has adequate time to complete the analysis and CODIS entry of the remaining 1,559 samples. Completion of Goal 1 is ongoing.

Progress 01 January – 30 June 2011: The LVMPD tracked and reported all required objectives during this reporting period. The LVMPD analyzed and entered 1,930 samples into CODIS during this reporting period resulting in 34 CODIS hits (4 hits were from offender samples previously processed in March 2010). The LVMPD has completed the goal of analyzing and entering a minimum of 2,915 offender samples into CODIS during the life cycle of this grant. Goal 1 Objectives 1 through 4 have been met.

Progress 01 July – 30 September 2011: Goal 1, objectives 1 through 4 were previously met.

GOAL 2 – Supplies for the collection and processing of convicted offenders and sex registrants will be purchased.

Objective 1: The Forensic Lab will purchase scalpels which will be used to cut buccal swab specimens from convicted offender and sex registrant samples.

Objective 2: The Forensic Lab will purchase DNA IQ kits over the lifetime of the grant for extraction of convicted offender and sex registrant samples on the Biomek NX Liquid Handling Robot.

Progress 01 October - 31 December 2009: Purchase orders for scalpels and DNA IQ kits were submitted for purchase in December. The supplies will arrive and be put to use for convicted offender analysis in the next reporting period. In November, a legal decision was made by the LVMPD to suspend sex registrant collection and DNA processing due to a court order filed in July 2008 which declares two newly adopted legislation bills (identified as SB471 and AB579) unconstitutional by the Federal District Court of Nevada. This ruling is currently on appeal to the 9<sup>th</sup> Circuit, but until that ruling is over-turned the LVMPD will not be processing or entering any additional sex registrant samples into CODIS. However, felon convicted offender collections and processing is still occurring. Progress towards completing the objectives of goal 2 will continue into the next reporting period.

Progress 01 January – 30 June 2010: Scalpels were received in January for cutting convicted offender specimens, and DNA IQ extraction kits were received in February for the extraction of offender samples on the Biomek NX liquid handling system. Additional scalpels and DNA IQ extraction kits will be ordered as needed during the remainder of this grant. Completion of Goal 2 is ongoing.

Progress 01 July – 31 December 2010: In December 2010 the Biology/DNA Detail submitted purchase orders for scalpels and DNA IQ kits. The orders will be received in the next reporting period. Completion of Goal 2 is ongoing.



Progress 01 January – 30 June 2011: During this reporting period scalpels, DNA IQ extraction kits, and Whatman EasiCollect devices ordered during the previous reporting period were received at the Forensic Lab. The Biology/DNA Detail placed additional orders for scalpels and DNA IQ kits during this reporting period which have been received. Goal 2, Objectives 1 and 2 have been met.

Progress 01 July – 30 September 2011: Goal 2, objectives 1 and 2 were previously met.

General Comments 01 October - 31 December 2009: In October the LVMPD noticed a severe data degradation issue with Applied Biosystems' Identifiler Kits, which is currently the LVMPD's only validated amplification kit for CODIS data entry. The LVMPD was the second laboratory in the United States to notify Applied Biosystems of such an issue, and during the subsequent weeks through the beginning of December, the LVMPD spent several weeks troubleshooting the issue. After Applied Biosystems notified all its customers of a product hold on Identifiler kits in December, the LVMPD received new kits which were allegedly corrected. However, the LVMPD is still having trouble obtaining usable data for casework samples, convicted offender samples and validation samples, and the agency is working very closely with Applied Biosystems to determine the source of the problem. Despite this setback in actively processing DNA samples, the LVMPD initiated overtime to prepare convicted offender specimens for DNA extraction in December. In three weeks staff members were able to accession 896 offender samples and cut 1,627 offender samples. In addition, staff has been extracting many samples waiting until amplification kits are ready for use. Overtime to process these samples will be utilized in the next reporting period.

General Comments 01 January – 30 June 2010: Upon receipt of quality amplification kits from Applied Biosystems, the LVMPD initiated overtime in February to process convicted offender specimens. In March, the Biology/DNA Detail processed and entered 507 convicted offender samples into CODIS. One sample which had been in the backlog since August 4, 2009 was completed and entered into CODIS March 16, 2010. The offender sample hit to a 10-case burglary series that had been ongoing since August 2008. LVMPD detectives had no idea the burglaries were linked because the suspect varied his modus operandi at each and every scene. This series of cases would have remained unsolved if it weren't for the funds provided in this grant to expedite backlogged database samples.

During this reporting period staff accessioned 4,626 offender samples and cut 3,006 offender samples using grant-funded overtime. Funds have enabled staff to remain caught up with incoming samples, preparing them for the DNA extraction and analysis process. Overtime to database, cut, process, analyze, review and enter convicted offender profiles into CODIS will continue into the next reporting period.

In May 2010 the LVMPD had a GPA assessment and this grant was reviewed. There were no issues identified with the management or spending of funds associated with this grant.

General Comments 01 July – 31 December 2010: During this reporting period staff accessioned 2,139 offender samples and cut 1,686 offender samples using grant-funded overtime. Funds have enabled staff to remain caught up with incoming samples, preparing them for the DNA

extraction and analysis process. Overtime to database, cut, process, analyze, review and enter convicted offender profiles into CODIS will continue into the next reporting period.

In this reporting period the Biology/DNA Detail processed and entered 621 samples into CODIS resulting in 13 CODIS hits. As there is a CODIS hit reporting lag due to confirmation testing requirements, the number of CODIS hits from these 621 samples may increase in the next reporting period. Of interest, one convicted offender hit to an unsolved 2009 homicide and a second convicted offender hit to another 2009 unsolved homicide and a 2009 burglary. In addition, one convicted offender sample hit to a 7-case series involving 5 burglaries and 2 auto thefts. This series had been ongoing since October 2008.

General Comments 01 January – 30 June 2011: In May 2011, a 6-month grant extension was approved to extend the life of the grant from March 31, 2011 to September 30, 2011. Since Goals 1 and 2 and all the underlying objectives have been met, any excess grant funds will be repurposed through a GAN request for the purchase of supplies for the use of offender sample processing.

The Biology/DNA Detail was very busy during this reporting period processing and entering 1,930 offender samples on federal funded grant overtime into CODIS. The Forensic Lab processed and entered a total of 3,286 offender samples over the life cycle of this grant, which is 371 offender samples above and beyond the original goal of analyzing and entering 2,915 convicted offender samples into CODIS. The 3,286 offender samples produced 80 CODIS hits, which are broken down as follows:

80 Convicted Offender CODIS Hits 01 October 2009 → 30 June 2011:

Burglary =	52
Auto Theft =	12
Sexual Assault =	6
Homicide =	4
Robbery =	4
Grand Larceny =	2

Final Comments 01 July – 30 September 2011: The Biology/DNA Detail completed processing offender samples associated with this grant in May 2011. Funds awarded from this grant enabled the forensic lab to eliminate 3,286 offender samples from the DNA backlog of the Biology/DNA Detail, which is 371 offender samples above and beyond the original goal of analyzing and entering 2,915 convicted offender samples into CODIS (~13% higher than anticipated). The 3,286 offender samples processed and entered into CODIS produced 80 hits, and the crime category affiliated with each of the 80 hits is detailed in the “General Comments Section 01 January – 30 June 2011”.

In addition, funds from this grant enabled the Biology/DNA detail to purchase supplies for offender processing to include scalpels, DNA IQ kits and Identifiler kits. As the LVMPD continues to face a tough fiscal climate, the purchase of these supplies was critical for ensuring the ongoing success of the Biology/DNA Detail’s ability to process convicted offender samples.

This grant has been another successful program and cooperative effort between the Las Vegas Metropolitan Police Department Forensic Laboratory and the National Institute of Justice.

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**FY09 Recipient Name:** Washoe County Sheriff's Office

**Award Number:** 2009-DN-BX-K042

**Award Amount:** \$196,030

**Final Report:** The award period of this grant extended from October of 2009 to November of 2011. The goal for this award was to eliminate the backlog of convicted offender samples and keep sample analysis current until the end of the grant. The Washoe County Sheriff's Office (WCSO) Biology Unit started with a backlog of 2,600 samples. It was expected that another 3,000 samples would be collected by March of 2010 for a total of 5,600 convicted offender samples. The quality control (QC) samples required for this processing were also to be outsourced to the vendor (Bode Technology) for a total of approximately 6000 samples to be DNA typed on this grant. Data packages from the vendor were to be reviewed by WCSO Biology Unit staff and uploaded to NDIS within 60 days of receiving the data from the vendor.

The WCSO Biology Unit staff is comprised of a unit Supervisor, five DNA Analysts, a DNA Technical Leader, and the State of Nevada CODIS Administrator. All members of the WCSO Biology Unit participated in achieving the goals of this grant.

The WCSO Biology Unit has successfully completed the goals and objectives as stated above. During the life of this grant, 6,036 convicted offender samples were processed along with 395 QC samples for a total of 6,431 samples. This grant has allowed for the elimination of our convicted offender DNA sample backlog and given us the ability to stay current on our convicted offender sample analysis.

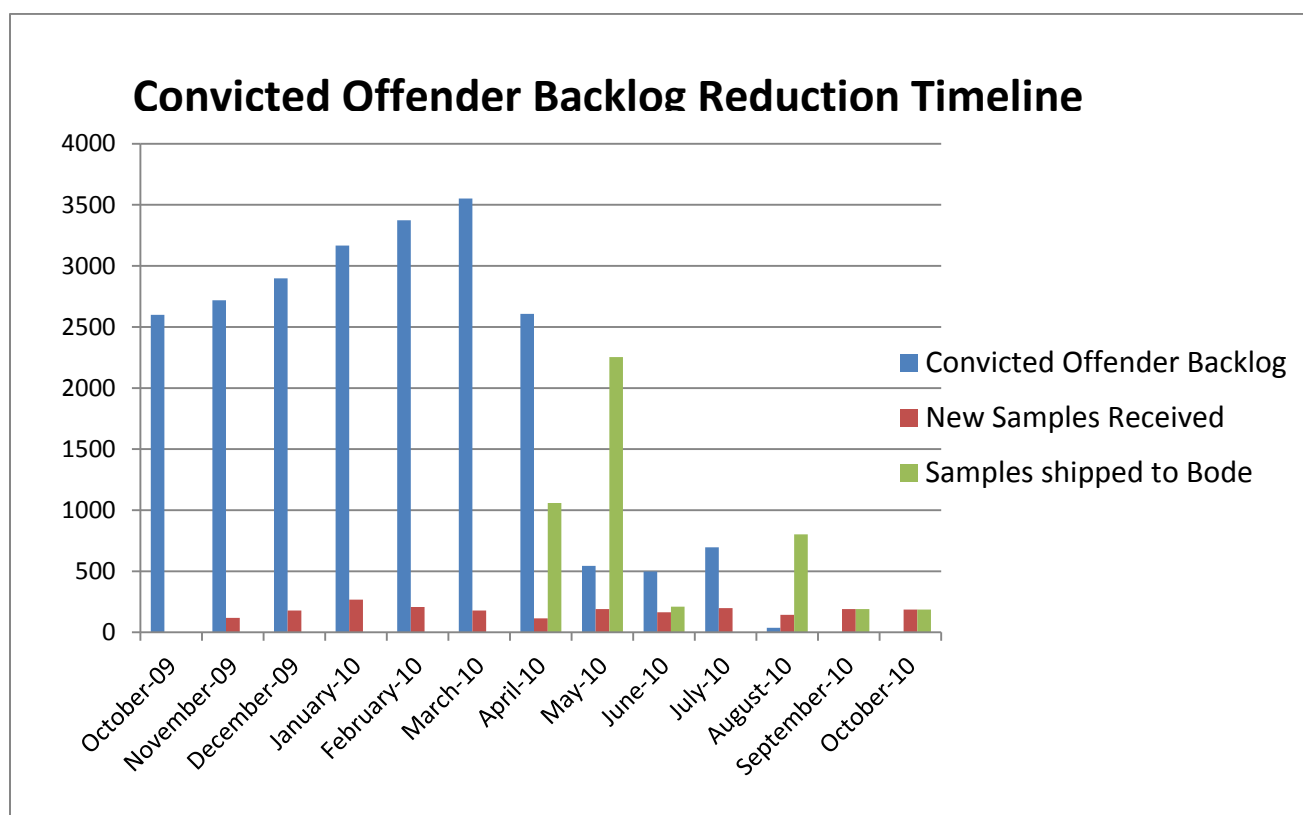
#### Convicted Offender Backlog

The total number of backlogged convicted offender samples at the initiation of this award (October of 2009) was 2600. Between October of 2009 and April of 2010 another 1,085 samples were received into the biology unit. These backlogged convicted offender samples were shipped to Bode Technology for DNA typing beginning in April of 2010. Previously analyzed convicted offender samples were included in these shipments and were analyzed as quality control samples.

By August of 2010, the WCSO Biology Unit had shipped every available convicted offender sample to Bode Technology for DNA typing and the backlog of convicted offender samples was eliminated. This equates to a 100% reduction in total backlogged samples. In September of 2010 the WCSO Biology Unit began sending all samples collected in the previous month to Bode Technology for outsourcing. The WCSO Biology Unit continued the process of sending out the previous month's collections to Bode Technology until the final batch for this grant was sent out in September of 2011.

Graph 1 illustrates the backlog decrease per month from the start of the grant to the Fall of 2010 when the backlog was eliminated and the WCSO Biology Unit began sending only current convicted offender samples for outsourcing.

Graph 1



### Upload to CODIS

Our objective was to have all data technically reviewed and the DNA profiles uploaded to CODIS within 60 days of receiving the data from Bode Technology.

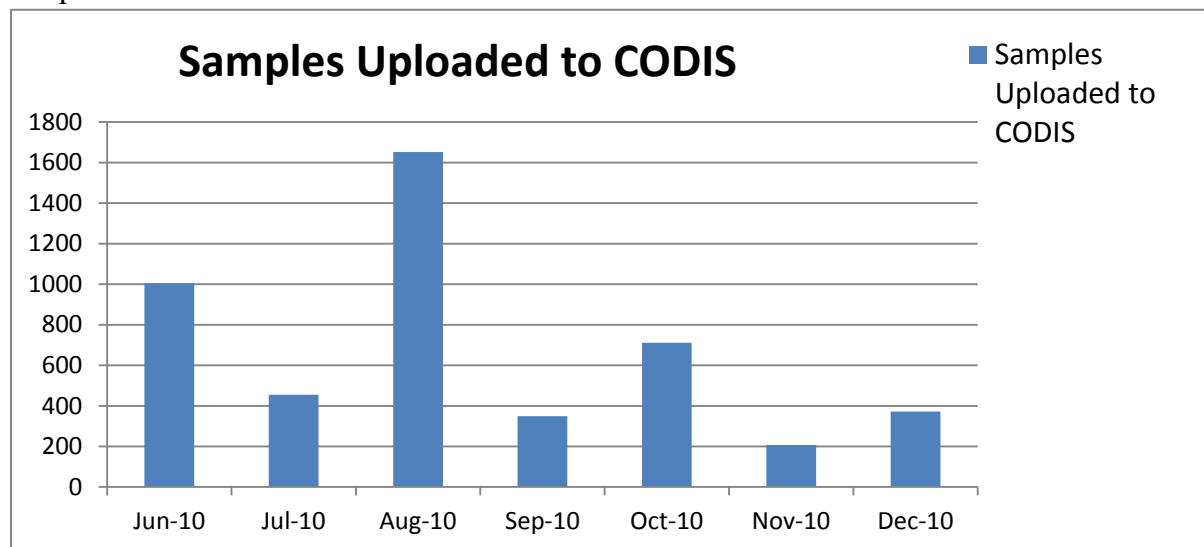
The first batch of sample data was received in May of 2010. The data was technically reviewed and the DNA profiles uploaded to CODIS in June of 2010. Over the life of the grant, data packages were divided evenly among the WCSO Biology Unit DNA analysts to ensure equal participation in the grant/database workload.

All data packages received from Bode Technology have been technically reviewed and the associated DNA profiles uploaded to CODIS within 60 days of receiving the data. The 3,685 backlogged convicted offender samples were reviewed and uploaded to CODIS by October of

2010. CODIS uploads after October of 2010 consisted of the reviewed profiles from the current monthly batches. From sample receipt in the laboratory to CODIS upload was less than 90 days.

Graph 2 illustrates the number of samples uploaded to CODIS in the first year of sample processing.

Graph 2



### CODIS Hit

At the writing of this report, there have been 63 CODIS hits to the convicted offender DNA profiles processed with this grant.

Table 1 shows the breakdown by case type of each hit.

Table 1

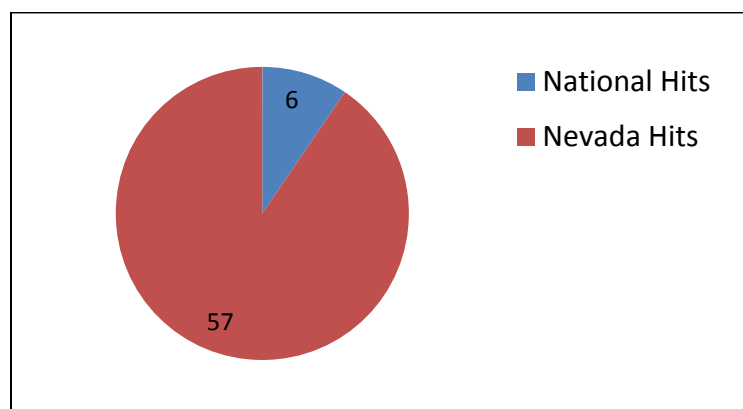
Type of Case Aided	Number of Hits
Burglary	27
Robbery	8
Auto Theft	7
Sexual Assault	5
Larceny	3
Vandalism	2
Assault & Battery	1
Controlled Substances	1
Death Investigation	1
Grand Larceny	1
Poss. of Stolen Property	1
Hits to Out of State Cases	6

The case types associated with these hits include 14 crimes against a person and 43 property crimes. Six of these hits were to crimes from outside the State of Nevada. In total, there have been 63 police investigations aided through the profiles placed into CODIS with this grant.

NDIS has long reflected the fact that criminals tend to stay in the states where they commit their crimes. The vast majority of crime scene profiles hit to a convicted offender from the state in which the crime was committed. The numbers from this grant project reflect this trend as well.

Graph 3 Nevada Forensic Unknown profiles hitting to Nevada Offenders (in red) and Forensic Unknown profiles from other states hitting to Nevada Offenders (in blue)

Graph 3



### De-Obligation of Funds

The amount of money requested for this grant was based on the cost of processing and reviewing 6,000 convicted offender samples. Prior to the grant request three vendors were queried as to their estimated cost per sample. All three vendors gave a price of not less than \$30 per sample. Our monetary request was based on that figure. When the bids came back, the successful bid had a price of \$21.45 per sample. Our total samples processed (including the QC samples) under this grant was 6,431. We exceeded our goal of 6,000 samples, spending a total of \$149,243.28, and giving back \$46,786.72. The disparity between the quoted and actual per sample price was the reason for the large de-obligation of funds on this grant.

### Conclusion

The WCSO Biology Unit believes this grant was a tremendous success. We were able to eliminate our convicted offender back log, sustain timely processing of newly received samples, and aided in 63 criminal investigations. We are grateful to the NIJ for providing these funds for our use and look forward to continuing this partnership in the future.

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**FY09 Recipient Name:** Oregon State Police

**Award Number:** 2009-DN-BX-K013

**Award Amount:** \$136,000

**Final Report:** The Convicted Offender and/or Arrestee DNA Backlog Reduction Program Grant (Award Number 2009-DN-BX-K013) was awarded to the Oregon Department of State Police, Forensic Services Division on September 16, 2009 for the budget period of October 1, 2009 through March 31, 2011. This report will detail progress made toward achieving the objectives as outlined this grant titled: *Reduction of Convicted Offender Backlog Samples Through Outsourcing and In-House Data Review*.

The objectives or goal set for this award are 1) outsourcing of convicted offender samples to minimize the backlog during the next 12 months, 2) provide supplies and overtime to process failed samples from the vendors and to confirm convicted offender samples that hit to the database, and 3) provide overtime for the review of the vendor data.

Report October 1, 2009 through December 31, 2009

During this reporting period, we did not expend any of these grant funds toward progress on the stated objectives.

Report January 1, 2010 through June 30, 2010

During this reporting period we purchased supplies to support the in-house processing and analysis of CODIS samples. In addition, on April 16th we requested a budget modification to support a full time DNA Forensic Scientist position for three months (July through September) instead of providing overtime. This was approved May 3, 2010. The Forensic Scientist was hired and started July 1, 2010. To date, no samples have been processed in-house or sent to vendor laboratories for processing.

Final Report July 1, 2010 through December 31, 2010

Objective 1 - outsourcing of convicted offender samples to minimize the backlog during the next 12 months

We sent 3,542 samples to a contract laboratory to be processed and analyzed during this reporting period. There were 164 sample failures with 3,377 profiles being acceptable for uploading into CODIS. Of these 3,377 samples, 42 were QC samples and 3,335 new profiles.

Objective 2 & 3 - provide supplies and overtime to process failed samples and provide overtime for the review of the vendor data

Various supplies (AmpFLSTR Identifiler PCR kits, buffer, tips, formamide, quantifiler DUO DNA quant kits, tubes and capillary arrays) were purchased during this reporting period for processing and analysis of CODIS samples in-house which included the samples that failed at the contract lab.

Sample Backlog July 1, 2009 to Current:

At the start of this grant project period, October 1, 2009, the CODIS backlog was 3100 samples. We did not, however, begin to expend this award until July 1, 2010 at which time the backlog had grown to 5,145 samples. By October 1, 2010 the backlog had decreased to 3,130 samples and as of December 31, 2010, our backlog was back up to 7,700 samples.

During this reporting period July 1, 2010 through December 31, 2010, we processed and analyzed 696 samples in-house and 3,542 samples were sent and processed by a contract laboratory. Of those samples analyzed, 3,864 profiles were entered into the CODIS database which resulted in 28 hits. See tables 1 and 2 below for a summary of CODIS samples analyzed, entered into CODIS and the number of hits obtained from profiles entered using funds from this 2009 CODIS grant award.

	Samples Attempted	Failures	Profiles Accepted	Profiles
Contract Lab	3542	164	3377	3335 new, 42 QC
26 Hits: 3 robberies, 1 assault, 2 sex offenses, 1 homicide, 18 property crimes				
	Samples Attempted	Failures	Profiles Accepted	Profiles
In-House	696	113	556	529 new, 27 QC
2 Hits: property crimes				

Project Period 7/1/10 to 12/31/10	Samples Processed	New Profiles Entered	CODIS Hits
In-house	696	529	2
Contract Lab	3,542	3,335	26
Total	4,238	3,864	28

#### CODIS Capacity

As of July 1, 2010, our in-house capacity to perform CODIS sample analysis was approximately 687 samples per month. This is an increase of 47 percent compared to the average number of samples analyzed per month (363) in 2008. By September 1, 2010, we had a newly renovated CODIS unit, all the essential equipment and methods validated and implemented and 1.5 forensic scientists on site for the processing and analysis of CODIS samples in-house. In addition, we hired an additional CODIS Forensic Scientist July 1, 2010. We anticipate the training to be completed and the analyst authorized to work CODIS samples by March 1, 2011. With this additional forensic scientist dedicated to processing and analyzing CODIS samples, we anticipate our in-house capacity to increase.

All funds for the 2009 convicted offender and/or arrestee DNA backlog reduction program grant have been expended.

**FY09 Recipient Name:** Pennsylvania State Police

**Award Number:** 2009-DN-BX-K015

**Award Amount:** \$429,887

**Final Report:** The following goals and objectives were set for this award:

GOAL 1 – To order supplies and bio-chemicals necessary to process database samples

Report 1 – July '09 to December '09



- Progress – In this reporting period, the laboratory obtained quotes and began preparing agency requisitions to purchase \$374,315.00 in supplies and chemicals (from the \$374,315.00) that were requested in our budget.

Report 2 – January '10 to June '10

- Progress – The laboratory received the supplies and chemicals previously ordered during the last reporting period. The laboratory began using these supplies to process database samples. This goal is complete.

GOAL 2 – To analyze and technically review data generated in-house

Report 1 – July '09 to December '09

- Progress – In this reporting period, the laboratory did not begin using these funds for the review of CO samples since the FY08 CO Backlog Reduction Award (2008-DN-BX-K003) has not yet been expended. Funds were approved for only the review, not the analysis, of DNA profiles prior to upload into CODIS. We anticipate closing the FY08 CO Backlog Reduction Award (2008-DN-BX-K003) by the end date of March 31, 2010. We used \$0.00 of the budgeted amount of \$55,572.38 to review the samples prior to upload into CODIS.

Report 2 – January '10 to June '10

Progress – The laboratories began to process database samples and technically review these samples for upload into CODIS. We used \$5,289.42 of the budgeted amount of \$55,572.38 to review the samples prior to upload into CODIS.

- This goal will continue into the next reporting period.

Report 3 – July '10 to December '10

Progress – The laboratories began to process database samples and technically review these samples for upload into CODIS. We used \$31,542.00 of the budgeted amount of \$55,572.38 to review the samples prior to upload into CODIS.

- This goal will continue into the next reporting period.
- Due to a limited number of qualified analysts, a limited amount of overtime was used during this period. A request to extend the project end date was submitted through GMS using the GAN process.

Report 4 – January '11 to June '11

Progress – The laboratory continued to process database samples and technically reviews these samples for upload into CODIS. We used the entire budgeted amount of \$55,572.38 to review the samples prior to upload into CODIS.

- A request to extend the project end date till September 30, 2011 was submitted through GMS using the GAN process and previously approved.
- Since all funds from the award have been expended, closeout of this award will be done. This goal is complete.

Final Report

All goals and objectives set for this award have been met. This award is ready to be closed out. During the last two months of this award, the laboratory continued to review and upload samples. An additional 5,482 samples were uploaded into CODIS as a result of these funds.

All profiles generated by sample analysis from this award were reviewed via funds from this award.

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**FY09 Recipient Name:** Instituto de Ciencias Forenses

**Award Number:** 2009-DN-BX-K213

**Award Amount:** \$262,500

**Final Report:** *This project is still in progress*

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**FY09 Recipient Name:** South Dakota Office of the Attorney General

**Award Number:** 2009-DN-BX-K028

**Award Amount:** \$161,700

**Final Report:** The following goal and objective was set for this award: Save work for the State by entering acceptable profiles into NDIS as soon as possible and minimizing failed samples.

Progress: In Dec 2009, a Request For Proposal (RFP) to test approximately 4620 samples were sent to six GSA approved vendor labs. The RFP specified that the offender and QC samples were to be analyzed using the Identifiler Plus kit, which amplifies the 13 core CODIS loci, Amelogenin (the sex indicating locus) and two additional loci. Responses were received from five labs; Orchid Cellmark – Nashville (OCN) was chosen in early January 2010. The grant award of \$161,700 allowed for \$35 per tested sample. Because the contract price was \$25 per sample, the SDFL was able to test more than the requested 4620 samples at that price.

After a site visit and the signing of the contract, 3486 samples (3320 offender and 166 QC) were shipped in March 2010. Data for all samples was received by 6-30-10. The last batch of data was uploaded to NDIS on 7-1-10. OCN lab then closed due to economic conditions. Samples under grant funding needed to be shipped to a different vendor; therefore, re-selection of a vendor was necessary. A new RFP was sent to five GSA approved vendor labs; responses were received from four labs and Bode Technology Group was chosen in late fall 2010. Due to a lower contract price of \$21.95/sample, more than the original remaining samples were able to be tested at Bode.

After the Bode site visit in January 2011, sample testing began. All FY09 offender grant funding was expended by June 30, 2011; 3400 samples (3238 offender and 162 QC samples) were tested at Bode. 3231 samples were uploaded to NDIS; seven offender samples failed.

Overall, 6551 of 6558 offender samples (approximately 99.9%) were successfully analyzed and have been uploaded to CODIS. The seven offender samples failed either due to not enough sample or the sample being a mixture. Re-acquiring DNA from the original offenders is ongoing. 25 hits have occurred due to the 6551 tested samples including one cold case homicide from Maine.

Lab	Orchid	Bode	Total
Offender Samples	3320	3238	6558
QC Samples	166	162	328

Total	3486	3400	6886
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**FY09 Recipient Name:** State of Texas

**Award Number:** 2009-DN-BX-K021

**Award Amount:** \$503,885

**Final Report:**

**Report 1:**

Goal 1 – To reduce the backlog of offender samples through paid overtime to qualified employees.

Progress – No progress during the first reporting period. Laboratory continues to use unexpended funding from prior grant.

Goal 2 – To reduce the backlog of offender samples through the purchase of consumables and reagents not available through State funding.

Progress – No progress during the first reporting period. Laboratory continues to use unexpended funding from prior grant.

**Report 2:**

Goal 1 – To reduce the backlog of offender samples through paid overtime to qualified employees.

Progress – No progress was made during the second reporting period. The laboratory continues to use unexpended funding from the prior grant.

Goal 2 – To reduce the backlog of offender samples through the purchase of consumables and reagents not available through State funding.

Progress – No progress was made during the second reporting period. The laboratory continues to use unexpended funding from the prior grant.

**Report 3:**

Goal 1 – To reduce the backlog of offender samples through paid overtime to qualified employees.

Progress – Laboratory personnel began working overtime utilizing grant funding in October 2010. The personnel were able to complete the analysis and upload of 2,159 additional offender samples due to the overtime work.

Goal 2 – To reduce the backlog of offender samples through the purchase of consumables and reagents not available through State funding.

Progress – Additional offender samples were worked on overtime during the reporting period. The Federal grant funding allowed the purchase of the supplies necessary to process those additional samples.

**Report 4:**

Goal 1 – To reduce the backlog of offender samples through paid overtime to qualified employees.

Progress – Laboratory personnel began working overtime utilizing grant funding in October 2010. Personnel continue to work overtime to further the goals of the backlog reduction grant. As time passes, however, fewer personnel are working overtime due to “burn-out”. The number of overtime hours originally projected to be worked during the grant period has been reduced by about half.

Goal 2 – To reduce the backlog of offender samples through the purchase of consumables and reagents not available through State funding.

Progress – CODIS personnel uploaded a substantial number of samples to the National Database during the reporting period. Increased efficiency due to continued improvement in automation and DNA extraction techniques have maximized throughput. The average cost per sample for reagents has risen by about \$2.20 during the last year. The laboratory uploaded an average of over 6,000 samples per month during the reporting period. The contribution due to NIJ grant funding during the reporting period is over 20,000 additional samples uploaded.

#### Final Report:

Goal 1 – To reduce the backlog of offender samples through paid overtime to qualified employees.

Progress – Laboratory personnel began working overtime utilizing grant funding in October 2010. There is no longer any reason for personnel to work overtime. The backlog has been eliminated. Current personnel can now keep up with the incoming sample receiving.

Goal 2 – To reduce the backlog of offender samples through the purchase of consumables and reagents not available through State funding.

Progress – CODIS personnel uploaded more than 22,000 samples to the National Database during the last reporting period. Increased efficiency due to continued improvement in automation and DNA extraction techniques have maximized throughput for the State CODIS Laboratory. The laboratory uploaded an average of over 5,500 samples per month during this reporting period. The contribution due to NIJ grant funding during the overall grant reporting period is over 31,000 additional samples uploaded to NDIS.

The number of Offender Hits produced during the final reporting period was 377. The total number of Investigations Aided during the final reporting period was also 377.

During the entire grant period, the Texas DPS CODIS Laboratory analyzed 31,747 new offender samples using funding under this grant.

The total number of Offender Hits produced during the overall grant period was 879. The total number of Investigations Aided during the overall grant period was also 879.

Due, in large part, to the funding receive from NIJ (over several grant years) for equipment, supplies, and overtime pay, the State of Texas no longer has an offender backlog. For the first time in a decade, the turn-around time for offender analysis is 30 days.

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**FY09 Recipient Name:** Utah Department of Public Safety

**Award Number:** 2009-DN-BX-K022

**Award Amount:** \$564,000

**Final Report:** On August 26, 2009 The Utah Department of Public Safety was informed that it had received funding for \$564,000 as part of “NIJ’s FY 2009 Convicted Offender and/or Arrestee DNA Backlog Reduction Program.” This report outlines the activities accomplished to meet the goals and objectives of this award.

Goals:

- To reduce the number of DNA database samples awaiting DNA analysis
- To increase the number of samples in the Convicted Offender Index in CODIS
- To increase the number of crimes solved through CODIS, both intrastate and interstate

Objective #1:

Outsource convicted offender samples to a vendor that is accredited by a nonprofit professional association that is nationally recognized within the forensic science community and approved by NIJ

Progress October-December 2009:

The request for proposal (RFP) for this grant was recently approved by the Utah Division of Purchasing. The RFP was posted on [www.bidsync.com](http://www.bidsync.com) under bid number AR10109 on January 13, 2010. The solicitation is scheduled to close on January 28, 2010.

As of January 21, 2010 there has been no analysis of backlogged convicted offender samples under this award.

As of January 21, 2010 there have been no hits associated with the analysis of backlogged convicted offender samples under this award.

Progress January-June 2010:

The contract for award number 2009-DN-BX-K022 was approved by all contracting parties as of April 8, 2010. Two shipments of samples have been sent to the contract laboratory. The first shipment contained 250 samples and was designed as a test batch to determine the contract laboratories analysis and reporting capabilities. The test batch was received and approved by UBFS. A second shipment of 4048 samples was sent to the contract laboratory and is undergoing analysis.

As of July 14, 2010, 247 samples have been analyzed under this award.

As of July 14, 2010, 235 samples have been uploaded to CODIS under this award.

As of July 14, 2010, there have been no hits associated with this award.

Progress July – December 2010

Three additional shipments have been sent to the vendor. The three shipments totaled 12,538 samples. One remaining sample set of 1,964 is to be shipped to the vendor completing the supply of samples for the contract.

As of December 28, 2010, 10,321 samples have been analyzed under this award.

3,009 profiles were reviewed and uploaded for this reporting period. As of January 20, 2011, 3,244 samples have been reviewed and uploaded to CODIS under this contract.

As of January 20, 2011, there have been 2 hits associated with this contract.

Progress January – June 2011:

Four additional shipments totaling 10,046 samples were sent to the vendor. The final cumulative total equals 26,882 samples sent for this contract.

16,429 samples have been analyzed for this reporting period. As of July 13, 2011, 26,882 samples have been analyzed under this award. The vendor had a 99% success rate for developing a genetic profile under this contract. All of the associated sample data has been delivered to UBFS.

20,665 profiles were reviewed and uploaded for this reporting period. As of July 13, 2011, 23,570 profiles have been reviewed and uploaded to CODIS under this contract.

24 hits were associated with this reporting period. As of July 13, 2011, there have been 26 hits total associated with this contract.

Progress July – September 2011

No additional samples were sent to the vendor. All samples had been sent as of the previous reporting period. Total number of samples sent for this contract was 26,882.

As of July 13, 2011, all of the samples (26,882) had been analyzed by the vendor.

3,011 profiles were reviewed and uploaded for this reporting period. All of the profiles generated by the vendor have been reviewed. A total of 26,581 profiles were reviewed and uploaded to CODIS under this contract.

7 hits were associated with this reporting period. There have been 33 total hits associated with this contract.

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**FY09 Recipient Name:** Virginia Department of Forensic Science

**Award Number:** 2009-DN-BX-K020

**Award Amount:** \$ 171,579

**Final Report:** The Department of Forensic Science (DFS) received funding under this grant to pay overtime salaries and FICA benefits for five DNA Data Bank analysts, who will analyze Data Bank samples and perform technical review of the data, and the overtime salaries and FICA

benefits for two full-time staff to perform sample analysis support functions. The funding was also provided to pay the hourly wages and FICA benefits for one new part-time support staff to assist with Data Bank operations. Additionally, this funding is to be used to purchase the necessary chemistries for analysis of backlogged samples and associated controls.

The Goal of this grant project is:

1. Eliminate the current backlog in the DNA Data Bank

In order to meet this goal, the following objectives were proposed in the application:

1. Hire one new part-time support staff to assist with Data Bank operations
2. Purchase the necessary chemistries for DNA analysis of backlogged samples
3. Analyze 4500 backlogged samples and 200 quality control samples

During this reporting period (Jan – Mar 2011), the following tasks were completed toward meeting the grant objectives:

1. Approximately 435 hours of overtime were worked with a total of 2700 DNA samples analyzed and 2665 profiles entered into CODIS. This resulted in 23 CODIS hits.
2. PowerPlex16 Kits were purchased for use in DNA analysis.

During the overall grant period of October 2009 – March 2011, the following accomplishments were realized:

1. DFS did not hire the wage support position that was proposed in the grant application. Personnel funds were transferred by GAN into “Supplies” for the purchase of reagent kits and other consumables.
2. PowerPlex16 Kits and Qiagen Extraction kits were purchased with grant funding and used for the analysis of backlogged samples.
3. A total of 7229 backlogged Data Bank samples were analyzed, exceeding the objective of analyzing 4500 backlogged samples. DNA profiles were generated from 7133 samples and entered into CODIS. In addition, 255 quality control samples were analyzed and technical reviewed. A total of 62 CODIS hits were obtained (at the SDIS and NDIS levels) from this group of backlogged samples.

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**FY09 Recipient Name:** Vermont Department of Public Safety

**Award Number:** 2009-DN-BX-K016

**Award Amount:** \$79,896

**Final Report:** The following goals and objectives were set for this award:

1. The original goal of this award is to analyze and enter 2700 samples into CODIS. The number of samples analyzed early in the grant period was low due to validation of the PowerPlex 16 HS. Samples are now being analyzed using this kit. The current goal after the GAN is to upload 2900 samples into CODIS.
2. To date over 2990 samples have been analyzed and over 2518 uploaded on this award and six investigative leads have been provided to investigators.
3. A GAN was received to convert ~\$13,000 in personnel costs to supplies which will be used to process and upload approximately 200 more samples using these grant funds. The supplies (mainly PP16HS kits) have been purchased and any samples processed with

those kits will be allocated to this grant. The number of samples analyzed will exceed 2900 as a number of samples run are QC samples and some represent samples that must be run more than once to obtain an uploadable profile. At least 2900 samples will be uploaded and attributed to this grant funding.

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**FY09 Recipient Name:** Wyoming Office of the Attorney General

**Award Number:** 2009-DN-BX-K103

**Award Amount:** \$80,000

**Final Report:** GPA Narrative: The following goal and objective were set for this award: This projects goal and objective is to facilitate the WSCL to analyze and review offender samples in-house using NIJ funding through this solicitation.

Goal #1: Facilitate the WSCL's ability to process Offender samples in-house..

This goal is has been achieved. The two thousand offender samples associated with this grant have been analyzed, technically reviewed and uploaded into NDIS.

Three hundred thirty-four (334) hours of overtime were used to facilitate the analysis and review of Offender samples. The acquisition process for necessary supplies is complete.

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