

**Supporting Statement
National Agricultural Workers Survey:
Office of Management and Budget (OMB) Control No. 1205-0453**

Introduction

With this submission, the Department of Labor (DOL), Employment and Training Administration (ETA) requests the Office of Management and Budget's (OMB) approval to administer seven new questions in the National Agricultural Workers Survey (NAWS) regarding the amount of time per day farm workers are employed in specific crops and tasks, and farm workers' hygiene- and clothes-laundering- practices. The information obtained from the proposed questions will improve the Environmental Protection Agency Office of Pesticide Program's (EPA/OPP) ability to characterize the patterns of exposure, better assess pesticide risks posed to farm workers, and develop improved training and educational programs to better manage the risks associated with exposure.

The NAWS is an employment-based, annual survey of the demographic, employment, and health characteristics of hired crop farm workers, including workers brought to farms by labor intermediaries. Each year, approximately 1,500 workers are randomly selected for an interview. Interviews are conducted three times per year to account for the seasonality of agricultural production and employment.

Several Federal agencies utilize the NAWS to meet their information collection needs. EPA/OPP, which has responsibility for assessing exposure to pesticides, is one such agency. The proposed seven questions were focus-group tested with farm workers in Texas, California, and Florida and were found to be well understood. The questions were then pilot-tested in the first interview cycle of fiscal year 2012 and were found to work very well. At this time, DOL/ETA is seeking OMB's approval to formally add the seven questions to the NAWS instrument and administer them for two years (six interview cycles) to each farm worker who is randomly selected for an interview.

A. Justification

A1. The circumstances that make the collection of information necessary

Collection of information on the U.S. hired farm labor force is necessary to monitor the terms and conditions of agricultural employment and to evaluate the human resources that are vital components of the nation's thriving agricultural sector.

The U.S. government has collected information on the employment and demographic characteristics of hired farm workers since 1944. Prior to the NAWS, the information was obtained via a supplement to the Current Population Survey (CPS). The Department of Agriculture (USDA) funded the supplement and also analyzed and published the data. The CPS supplement provided detailed national estimates about farm workers for use by the public.

Federal and state government programs also relied on this information for programmatic purposes.

DOL assumed responsibility for collecting data on hired crop workers in response to the Immigration Reform and Control Act of 1986 (IRCA), which required DOL to estimate the availability of seasonal farm labor from 1990 to 1993. To comply with the requirement, it became necessary to replace the CPS methodology, which resulted in a large undercount of migrant farm workers, with a new survey methodology: the NAWS. Other parts of IRCA authorized permanent appropriations for the purposes of: (1) recruiting domestic workers for temporary labor and services which might otherwise be performed by nonimmigrants and agricultural transition workers; and (2) monitoring the terms and conditions under which such individuals are employed.

NAWS data are essential for understanding changes in and estimating the sizes of populations eligible for assistance via farm worker and farm worker-related programs. The Federal government currently allocates approximately \$1 billion per year to such programs, including those administered by the Departments of Health and Human Services (Migrant Health and Migrant Head Start), Education (Migrant Education) and Labor (National Farmworker Jobs Program). As the only national information source on the employment, demographic, and health characteristics of hired crop workers, NAWS data are central for informing these programs. The Wagner-Peyser Act, as amended (29 USC 49f (d) and 49l-2(a)) authorizes DOL to collect this information.

Justification for the new EPA questions

Information detailing agricultural tasks and personal hygiene practices, which impact the exposures of farm workers to agricultural pesticides, can improve EPA's occupational pesticide risk assessment process. Key stakeholders focused on worker advocacy have repeatedly commented on this topic indicating that the available information is insufficient to fully characterize risks. In December 2008, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) convened under the Federal Advisory Committee Act (FACA), in discussing the state of the science regarding pesticide exposure measurement, noted the lack of information regarding the amount of time per day farm workers are employed in specific crop-task combinations:

<http://www.epa.gov/scipoly/sap/meetings/2008/december/decfinalreport.pdf>

The information gathered via the NAWS will assist EPA/OPP with the development of a more robust, data-based response for addressing the review panel and stakeholder concerns. The time spent working per day can be used directly in assessments or can be used to better characterize risks for specific hand labor activities (e.g., how many hours an individual harvests a crop per day which is directly used in risk assessment). Personal hygiene practices such as bathing and laundry patterns can impact the potential magnitude of exposures for individuals over extended periods of time (e.g., if they wear previously contaminated clothing).

A2. The uses of the information

The NAWS is a multi-agency funded effort and designing the questionnaire is a collaborative undertaking, involving several Federal agencies that directly use the results. In addition to ETA, these have included EPA, the Department of Health and Human Services (DHHS), and the Department of Education (DoEd). Representatives of these and other agencies regularly meet to discuss program-specific uses of NAWS data.

ETA uses NAWS data in its formula for allocating farm worker employment and job training funds across states under Section 167 of the Workforce Investment Act. The DHHS' Head Start Bureau relies on NAWS data to estimate the number of children of farm workers who are eligible for the Migrant and Seasonal Head Start Program, and to identify barriers that eligible children face accessing the program. Similarly, DoEd's Office of Migrant Education periodically utilizes NAWS findings to better understand the needs and characteristics of the population served in its various programs.

In FY 2006, the Congressional Budget Office (CBO) relied on NAWS data to estimate the number of unauthorized farm workers who would qualify for legalization under Section 613 (a) "The Blue Card Program" of Senate Amendment 3192 to the Securing America's Border Act (S.2454). CBO used the resulting finding and other NAWS data to project the costs of the proposed legislation. Similarly, the Congressional Research Service used NAWS data in FY 2006 to estimate the share of newly legalized farm workers who would quickly leave the farm labor market upon obtaining a legal status.

The Bureau of the Census also uses the NAWS. In preparation for the Decennial Census, it used NAWS findings on farm worker household characteristics and living arrangements to inform its approach to locating and administering the census questionnaire to migrant and seasonal farm workers, a population that has historically been undercounted.

In FY 2004, DHHS utilized NAWS health insurance data to fulfill its obligations under Section 404 of Public Law 107-251, "The Health Care Safety Net Amendments of 2002." Section 404 required DHHS to report to Congress on the problems experienced by migrant and seasonal farm workers in obtaining health services from the State-administered Medicaid and State Child Health Insurance Programs. In FY 2002, DHHS, Bureau of Primary Health Care used NAWS findings to construct enumeration profiles of migrant and seasonal farm workers and their dependents in ten states.

While NAWS data are used primarily by U.S. Federal government agencies for programmatic purposes, they are also used to exemplify the U.S. government's fulfillment of responsibilities under international agreements. In FY 2000, the Department of State utilized NAWS findings at the Best Practices for Migrant Workers conference, which was held in preparation for the spring 2001 Summit of Americas. DOL's Bureau of International Labor Affairs has used NAWS findings at each of the last four U.S.-hosted government-to-government meetings with Mexico regarding the labor rights of Mexican migrant farm workers. These meetings are part of the dispute resolution process under the North American Agreement on Labor Cooperation

(NAALC), the labor side-bar agreement to the North American Free Trade Agreement. In 2002, the Commission for Labor Cooperation, which was established under the NAALC, made extensive use of NAWS data in its report “Legal Background Paper on Migrants in North America.”

Several Presidential Commissions have used NAWS findings for program evaluation purposes. These include the Commission on Migrant Education, the Commission on Agricultural Workers, and the Commission on Immigration Reform. Moreover, the NAWS provides timely information to Congress on agricultural labor and child labor issues. The Government Accountability Office has utilized NAWS data in its reports to Congress about information gaps on the immigrant population and DOL made extensive use of NAWS findings in its December 2000 report to Congress “The Agricultural Labor Market - Status and Recommendations.”

The uses of information that would be obtained from the new EPA questions

The information obtained from the new questions would allow EPA/OPP to better characterize the patterns of exposure for farm workers. Specifically, the information will permit a more rigorous determination of which patterns of exposure have the most potential risks while allowing for a more appropriate determination of the proper toxicological inputs to be used for assessment purposes. The time spent working per day can be used directly in assessments or can be used to better characterize risks for specific hand labor activities (e.g., how many hours an individual harvests a crop per day which is directly used in risk assessment). Personal hygiene practices such as bathing and laundry patterns can impact the potential magnitude of exposures for individuals over extended periods of time (e.g., if they wear previously contaminated clothing).

A3. The use of information technology to reduce burden

The use of information technology to reduce respondent burden is currently inappropriate for this survey due to the very low literacy levels among farm workers. All interviews are conducted in-person and the interviewer records (writes down) respondent answers directly on the paper questionnaire. The proposed EPA questions will be inserted into the primary NAWS questionnaire.

A4. Efforts to identify duplication

There are no reliable national estimates of the employment, demographic, and health characteristics of hired crop workers that would render the NAWS duplicative. Prior to the NAWS, information on farm workers was collected via a supplement to the CPS. The CPS, however, excludes large numbers of employed crop workers from its sample, particularly the foreign-born and migrant workers. Many of these workers are difficult to find because they do not live at recognized addresses for long periods of time. USDA’s Farm Labor Survey (FLS) was also considered. The FLS collects wage and other employment data at the national and

regional level. It is conducted with employers and personnel managers, however, and cannot be used to describe the characteristics of hired crop workers.

In addition to considering other surveys, DOL also investigated the possibility of using existing data sets to evaluate the characteristics of workers in U.S. crop agriculture. Unfortunately, data recorded by social security numbers in the Unemployment Insurance (ES 202) files, as well as files of the Social Security Administration, do not provide the appropriate employment, demographic, and health characteristics. DOL determined that only a survey that was both personally administered and establishment-based (workers are sampled at their place of employment) would be appropriate for describing the population of hired crop workers. The NAWS is the only survey that satisfies these requirements.

Efforts to identify duplication of the information that would be obtained from the EPA questions

As the FACA- FIFRA SAP noted in December 2008, there are no known national-level studies that assess the length of the workday for specific crop-task combinations. EPA/OPP has determined that the NAWS, which is the only national-level survey of the demographic, employment, and health characteristics of farm workers, is the only information collection vehicle available for obtaining both length-of-workday and hygiene-practices information. Although the NAWS currently obtains the number of hours the farm worker was employed last week at his/her current farm job, there are no questions in the survey that would permit the calculation of hours per day, let alone hours per day in specific crop-task activities. Likewise, there are currently no questions in the NAWS regarding bathing and clothes laundering practices.

A5. Minimizing small employer burden

Agricultural employers of all sizes are selected in the NAWS by simple random sampling. It is necessary to sample employers first as there are no universe lists of farm workers. The farm worker sampling frame at each establishment is constructed with the help of the employer, packinghouse manager, personnel manager, farm labor contractor, or crew leader, as appropriate. In each case, the ‘employer’ serves as a voluntary contact point for the purpose of creating the worker frame.

To reduce burden on both agricultural employers and farm workers, a stratified sample is used to represent the national population of farm workers. The NAWS contractor minimizes the burden of this activity on all employers, including small employers, by trying to determine if the employer is still in business before contacting the business and by notifying the employer ahead of time by mail that they have been selected to participate. To further minimize burden, farm workers are interviewed, whenever possible, outside the workplace, and during a break period, lunch, or before or after the workday. In all cases, interviewers are instructed, and employers are informed ahead of time, that the interview process is not to interfere with the employer’s production activities.

This information collection does not have significant economic impact on small entities.

A6. Consequences if the collection is not conducted or is conducted less frequently

The NAWS is conducted yearly in three cycles to ensure sensitivity to seasonal fluctuations in labor across the country. Staggered sampling cannot be avoided due to the seasonality of crop employment. A representative random sample of employed farm workers can only be obtained by conducting interviews at various times in the year. The seasonality of crop employment and the high mobility of workers require seasonal sampling in order to avoid bias.

Without the addition of the seven questions to the NAWS, EPA/OPP will not have the data it requires to accurately assess and quantify farm worker risk to pesticide exposure and design appropriate educational and training programs to better manage risk of exposure.

A7. Explanation of special circumstances

None of the circumstances listed in this section apply to the NAWS. This information collection is consistent with 5 CFR 1320.5.

A8. Consultations with outside agencies regarding the availability of data

Over the survey's 20-year history, DOL has consulted with many outside agencies regarding the availability of information on the demographic, employment, and health characteristics of farm workers. These have included the Departments of Agriculture, Health and Human Services, Homeland Security, and Education, as well as other agencies, including the Social Security Administration, the Bureau of the Census, the Bureau of Economic Analysis, EPA, and the Food and Drug Administration. These departments and agencies support the extension of the NAWS survey as a means of complementing other data available to them. Indirect but useful data about farm workers are available from USDA, which conducts the Census of Agriculture and the Farm Labor Survey. None of the USDA data, however, overlaps with NAWS data.

As noted by the FIFRA SAP in December 2008, there are currently no national-level data on the amount of time per day farm workers are employed in specific crops and tasks. Likewise, data on farm workers' hygiene practices is also unavailable.

EPA/OPP consulted with the National Institute on Occupational Safety and Health, Division of Surveillance, Hazard Evaluations and Field Studies, and the Department of Health and Human Services, Health Resources and Services Administration on the proposed questions. These agencies provided valuable input on the focus and tone of the questions.

In consultation with BLS and OMB in 2008, ETA's contractor for the survey designed a strict probability sampling procedure at the last level of stratification and made a number of refinements to the mathematical formulas for the post sampling weights and variance estimates.

As required by the Paperwork Reduction Act of 1995 (44 USC. 3506(c)(2)(A)), ETA published a notice in the Federal Register on 04/05/2011 (76 FR 18798), seeking public comment on the proposed questions. ETA received no comments during the 60-day comment period.

A9. Remuneration to respondents

Farm workers will be compensated \$20 for their time responding to the survey to offset the inconvenience and any expense incurred to participate, e.g., child care. NAWS interviewers provide the incentive just prior to the start of the interview. There will be no additional incentive payment to respondents for answering the seven EPA/OPP questions. Research indicates incentives increase response rates in social research (Ryu, Cooper, & Marans, 2006). According to the National Science Foundation, monetary incentives improve study participation and offset the costs of follow-up and recruitment of non-respondents (Zhang, 2010). Incentives are not expected to exceed \$30,000 (1500 responses x \$20).

A10. Confidentiality assurances

The survey collects information on wages and working conditions, legal status, occupational health, and recruitment practices. The workers are guaranteed privacy of their information to help them overcome any resistance to discussing these issues. The workers are informed of the purposes of the information collection as well as the safeguards to protect its confidentiality.

Respondents are also informed of the limitations concerning the privacy assurance. Specifically, they are informed that: 1) under written agreement with Federal research agencies, ETA may release certain information necessary for research but only after all identifying information has been removed; and 2) unless required by law, or necessary for litigation or legal proceedings and except as indicated in the privacy statement, ETA will hold all personal identifiers, e.g. name and address, in total confidence and will not release them.

Interviewers are sworn to protect the privacy of both agricultural employers and farm worker respondents. To protect the identity of agricultural employers, only the direct-hire employees of the contractor who have been made BLS agents and who have sworn to abide by the privacy safeguards may have access to the names and address of employers and may only use this information for the purpose of locating hired crop workers. Workers are interviewed alone to protect their privacy. Additionally, farm worker respondents will be protected by ETA's System of Records for the NAWS, which was established under the Privacy Act (5 USC 552a). At the conclusion of the survey, all records of the names and addresses will be destroyed.

A11. Sensitive questions

The questions on legal status and health are likely to be the most sensitive. Based on responses to these questions, however, it is evident that the confidentiality assurances, as well as the rapport that develops between the interviewer and respondent, make them less intrusive. The legal status questions provide valuable information to Congress when it considers legislation to amend the Immigrant and Nationality Act. Likewise, the Federal agencies that have mandates concerning the health status of farm workers require complete information on occupational health in order to plan, implement and evaluate their programs effectively. Farm workers respond well to all the health questions and the data obtained is of high quality. Information will be analyzed in aggregate form and individual health histories will not be available to researchers. The confidentiality of the respondents will be guaranteed.

Sensitivity of the proposed EPA questions

Of the seven proposed questions, only one was found to be somewhat sensitive during cognitive testing. In the section on clothing articles, some respondents seemed reluctant to answer the question that asked if the respondent was wearing any articles of clothing that he/she also wore the previous day. This issue was resolved during pilot-testing by adding the following interviewer dialogue before the questions about clothing articles: “It is also recognized that workers do not always have enough working clothes or enough time or money for washing their work clothes as often as they might like, and that some articles of clothing are not washed as often as others.” During pilot testing, the interviewers reported that respondents did not express any indignation or displeasure to any of the proposed questions.

A12. Hour burden for respondents

The estimated annual total hour burden is 1,693 (see Table 1 below). Approximately 2,064 respondents will be divided into two groups and approached for different purposes. The first group of 1,500 randomly selected farm workers will be administered the NAWS questionnaire. The time to administer this instrument will vary in length from 48 to 65 minutes, with an average of 60 minutes¹. The time varies with the number of individuals in the farm worker respondent’s household and the number of jobs held in the preceding year. For example, worker respondents without children less than six years old will require an average of 59 minutes to complete the interview whereas worker respondents with children less than six years will require an additional six minutes because they will be asked special questions on child care services. Taking into consideration all family types, the average time per worker respondent is 60 minutes, as claimed on the survey instrument. Assuming a farm worker’s time is worth \$9 per hour, the total cost is \$13,500 of worker time.

¹ Sixty minutes is the estimated average time it will take a farm worker to respond to the survey questions. The average time per response of 49.2 minutes recorded in the Federal Register notice concerning this information collection represents the average response time when agricultural employers’ participation is taken into account.

The second group will be the estimated 564 employers who will be approached in person and invited to participate in the survey. The number of employers is based on the number of interviews done per farm and the employer response rate for FY 2009. In FY 2009, 2,219 workers were interviewed on 489 farms, or about 4.5 workers per farm. A total of 833 farms were determined to be eligible for participation, meaning that farm workers were employed there when interviewers arrived to speak with the employer. Interviews were conducted at 489 of the eligible farms, for a grower response rate of 59 percent. To collect information from 1,500 farm worker respondents in FY 2012, interviews will need to be sampled from approximately 333 establishments. Assuming the employer response rate will be at least 59 percent, 564 eligible growers will need to be approached and invited to participate.

Participation occurs when the employer allows interviewers to explain the purpose of the survey to the workers and to select a random sample of them for an interview. In FY 2009, 66 percent of the employers who had workers at the time of contact, and were thus eligible to participate, agreed to allow interviewers to contact the workers. As noted above, interviews were conducted at 59 percent of the eligible establishments. Employers who agree to participate inform the interviewer about the number and location of the potential worker respondents. The discussion with employers, including those who decide not to participate, can last from five to 30 minutes, depending on the number of questions the employer might have about the purpose of the survey. The average length is approximately 20 minutes.

The estimated average time of 60 minutes per farm worker interview is based on twenty years of survey administration (the NAWS began in FY 1989) and is comparable to the average number of minutes per interview required in previous similar surveys after accounting for differences in questionnaire content. In a 1997 survey of the demographic characteristics and occupational health of migrant Hispanic farm workers in six Northern California Migrant Family Housing Centers (McCurdy et al. 2003), in which 1,201 adult farm workers were interviewed in person several times over the harvest season, the University of California at Davis (UCD) authors reported that the initial questionnaire, available at http://mccurdy.ucdavis.edu/fwis/FW_ADULT_INIT.DOC, required approximately 30 to 40 minutes to complete.

The UCD questionnaire is similar to but shorter than the NAWS questionnaire. Like the NAWS questionnaire, it elicited demographic, employment, and health information. Unlike the NAWS, it did not include question domains on employment benefits, housing, and asset ownership, participation in education and training programs, receipt of needs- and contribution-based social services such as welfare and unemployment insurance, and child care services. In addition, the UCD questionnaire did not capture as much household demographic information as the NAWS.

Another survey similar to the NAWS was the California Agricultural Worker Health Survey (CAHWS) <http://www.cirsinc.org/SurveyInstruments.html>. This survey was conducted in 1999 by the California Institute for Rural Studies, Inc., (Villarejo et al. 2000) http://www.calendow.org/uploadedFiles/suffering_in_silence.pdf. The main survey instrument, which borrowed generously from the NAWS questionnaire, and included a household grid and work grid that are essentially identical to those found in the NAWS, was administered in person

to 971 California agricultural workers. The authors estimated that about 20 to 30 minutes were required to complete it. Unlike the NAWS, the CAWHS instrument included lengthy sections on access to health care services, self-reported health conditions and doctor-reported health conditions. Also unlike the NAWS, the CAWHS elicited health-related information about each member of the subject's household. These health sections comprised about 29 pages of the 70-page instrument. The CAWHS, however, did not include child care questions or the proposed questions concerning the amount of time workers are employed in specific crops and tasks, and hygiene- and clothes laundering-practices.

Table 1. Estimated Burden Hours Associated with the FY 2012 NAWS

Who will be interviewed?	Survey Instrument	Respondents per Year	Average Time per Respondent	Total Hours
Farm Workers	Primary Questionnaire, including proposed EPA questions	1,500	59 minutes	1,475
Farm Worker Parents with children less than six years old	Child Care Questions*	300**	6 minutes	30
Employers	Point of Contact Only	564	20 minutes	188
Total		2,064		1,693

* These questions were approved in a previous Information Collection Request.

** Not included in total respondents; they are a subset of the Primary Questionnaire respondents.

The only additional cost is that which employers incur for helping the interviewer establish a worker frame. This request, however, does not encompass interviews of employers. The employer is approached strictly as a contact point for the selection of a random group of workers. As noted above, the employer contacts require an average of 20 minutes per farm. The estimate of 188 hours is based on 564 employers at 20 minutes per employer. Assuming an employer's time is worth \$45 per hour, the total cost is \$8,460 of employer time.

A13. Cost burden to respondents

ETA associates no burden with this information collection beyond the value of respondents' time.

A14. Costs to the Federal Government

The estimated total survey cost for FY 2012 is \$2,427,789. This includes the cost of the contract (\$2,301,096) and ETA employee time (\$126,693). The contract costs include sampling

(\$175,979), questionnaire design and testing (\$97,183), data collection (\$1,819,319), and report and public data set preparation (\$208,615).

Table 2, below, shows the additional survey costs, by cost category, associated with the proposed EPA questions.

Table 2. Survey Costs Associated with the Proposed EPA Questions

Cost Category	Without EPA Questions	Additional Cost EPA Questions	New Survey Costs
Sampling	\$175,979	\$0	\$175,979
Questionnaire Design and Testing	\$93,360	\$3,823	\$97,183
Data Collection	\$1,768,052	\$51,267	\$1,819,319
Report and Data Set Preparation	\$200,332	\$8,283	\$208,615
ETA Employee Time	\$126,693	\$0	\$126,693
Total	\$2,364,416	\$63,373	\$2,427,789

A15. Program adjustments

Two factors account for the increase of 92 burden hours from the previously approved inventory of 1,601 to the current request of 1,693 (see Table 3 below): 1) the addition of four minutes per farm worker respondent for the EPA questions, and 2) the injury questions will not be administered.

Table 3. Change in Burden Hours Associated with the FY 2012 NAWS

Respondent Type	Respondents per Year		Average Time per Respondent (minutes)		Total Hours		Change
	Previous	New	Previous	New	Previous	New	
Farm Workers	1,500	1,500	55	59	1,375	1,475	+ 100
Farm Workers with a Qualifying Injury	45*	0*	10	0	8	0	- 8
Farm Worker Parents with children less than six years old	300*	300*	6	6	30	30	[0]
Employers	564	564	20	20	188	188	[0]
Total	2,064	2,064			1,603	1,693	+ 90

* Not included in total respondents; they are a sub-set of the Primary Questionnaire respondents.

A16. Publication plans

ETA released an updated version of the public use data set on January 5, 2011: http://wdr.doleta.gov/directives/corr_doc.cfm?DOCN=2974. The data set, which BLS cleared for confidentiality purposes, contains data for Fiscal Years 1989-2009. An updated data set, containing data for Fiscal Years 1989-2011 will be released in the spring of 2012. National-level summary reports of the 2003-2004, 2005-2006, 2007-2008, and 2009-2010 data will be released upon completion of an independent evaluation of the precision of the point estimates included in those reports.

Publication or dissemination on the part of EPP/OPP's Health Effects Division (HED) will be in the form of publicly-available regulatory exposure/risk assessments in which the survey results will be cited. Additional dissemination could be in the form of policy/guidance documents outlining EPA/OPP/HED exposure/risk assessment procedures that utilize and reference the survey results.

A17. Display of OMB number and expiration date

The OMB Clearance Number and Expiration Date are published on the main NAWS questionnaire in the upper left-hand corner.

A18. Exceptions to the certification statement, item 19 of OMB 83-I

This item is not applicable to this information collection because no exceptions are sought.

REFERENCES

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