

US EPA ARCHIVE DOCUMENT

1711.03, OMB Control Number 2090-0019, expiring on 10/31/99. The ICR describes the nature of the information collection, and its expected burden and cost.

DATES: Comments must be submitted on or before October 25, 1999. They may be sent via e-mail to

bonner.patricia@epa.gov or via fax to 202-260-4968.

ADDRESSES: USEPA, Policy & Reinvention, Mail Code 2161, 401 M Street SW, Washington, DC 20460.

FOR FURTHER INFORMATION CONTACT:

Sandy Farmer at EPA by phone: (202) 260-2740; by

e-mail: *farmer.sandy@epamail.epa.gov* or download a copy of the ICR off the Internet at <http://www.epa.gov/icr> and refer to EPA ICR No. 1711.03.

SUPPLEMENTARY INFORMATION:

Title: Voluntary Customer Service Satisfaction Surveys, OMB Control No. 2090-0019, EPA ICR Number 1711.03, expiring 10/31/99. This is a request for extension of a currently approved collection of a generic clearance for customer satisfaction surveys directed under Executive Order 12862 "Setting Customer Service Standards" (9/11/93).

Abstract: EPA uses voluntary surveys to learn how satisfied EPA customers are, and how we can improve services, products and processes. EPA surveys individuals who use services, products or processes. During the next three years, EPA plans up to 712 surveys, and will use results to target/measure service delivery improvements. The Agency plans to use: comment cards, evaluation forms and web-based feedback; telephone and written (mail) surveys; and focus groups and in-person interviews. No Agency may conduct or sponsor, and a person is not required to respond to, a collection of information unless it has a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. The **Federal Register** document required under 5 CFR 1320.8(d), soliciting comments on this collection of information was published on 5/10/99 (64 FR 25037); one inquiry and no comments were received.

Burden Statement: Response ranges from seconds to 6 hours/person; the average annual public reporting and recordkeeping burden for this information collection is 13.7 minutes/response. Labor costs are based on median earnings reported (\$543/week) by the Bureau of Labor Statistics in July 1999. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or

for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Respondents/Affected Entities: Any person or entity that uses EPA services.

Estimated Number of Respondents: 68,740 annual average.

Frequency of Response: Generally, 1 time; however, people can comment many times to Internet screens.

Estimated Total Annual Hour Burden: 15,536.

Estimated Total Annualized Capital, Operating, and Maintenance Cost Burden: \$0.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques, to the following addresses. Please refer to EPA ICR No. 1711.03 and OMB Control No. 2090-0019 in any correspondence.

Ms. Sandy Farmer, U.S. Environmental Protection Agency, Office of Policy, Regulatory Information Division (2137), 401 M Street, SW, Washington, DC 20460;

and

Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Desk Officer for EPA, 725 17th Street, NW, Washington, DC 20503.

Dated: September 17, 1999.

Richard T. Westlund,

Acting Director, Regulatory Information Division.

[FR Doc. 99-24840 Filed 9-22-99; 8:45 am]

BILLING CODE 6560-50-P

ACTION: Notice of intent to grant petition.

SUMMARY: The United States Environmental Protection Agency is announcing our intent to grant the petition of Pioneer Chlor-Alkali, Inc. in St. Gabriel, Louisiana for a site-specific determination of equivalent treatment (DET). This DET would address Pioneer's Remerc process for treating K106 mercury wastes under the Resource Conservation and Recovery Act (RCRA).

The proposed DET would recognize Remerc, a hydrometallurgical process, as an equivalent technology to roasting or retorting with recovery of mercury for reuse, our current land disposal restrictions (LDR) hazardous waste treatment standard for high mercury K106 waste (wastewater treatment sludge from the mercury cell process used in chlorine production). If we grant this DET, Pioneer will be allowed to use Remerc to treat high mercury K106 wastes, and the treatment residuals will be subject to a mercury limit of 0.20 mg/L TCLP.

DATES: This DET is effective on October 25, 1999, unless we receive relevant adverse comment by October 14, 1999. If we receive such comment(s), we will publish a timely notice in the **Federal Register** informing the public that this DET will not be automatically granted and indicating the further steps that will be taken.

ADDRESSES: Commenters must send an original and two copies of their comments referencing Docket Number F-99-PCAP-FFFFF to: RCRA Docket Information Center, Office of Solid Waste (5305G), U.S. Environmental Protection Agency Headquarters (EPA, HQ), 401 M Street, SW, Washington, DC 20460. Hand deliveries of comments should be made to the Arlington, VA, address below. Comments may also be submitted electronically through the Internet to: *rcra-docket@epamail.epa.gov*. Comments in electronic format should also be identified by the docket number F-99-PCAP-FFFFF. All electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

Commenters should not submit electronically any confidential business information (CBI). An original and two copies of CBI must be submitted under separate cover to: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, 401 M Street, SW, Washington, DC 20460.

Public comments and supporting materials are available for viewing in the RCRA Information Center (RIC),

ENVIRONMENTAL PROTECTION AGENCY

[FRL-6442-9]

Land Disposal Restrictions: Notice of Intent To Grant a Site-Specific Determination of Equivalent Treatment to Pioneer Chlor-Alkali, Inc.

AGENCY: Environmental Protection Agency.

located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, it is recommended that the public make an appointment by calling (703) 603-9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost \$0.15/page. The index and some supporting materials are available electronically. See the **SUPPLEMENTARY INFORMATION** section for information on accessing them.

Background information for this document is available on the Internet. Follow the instructions below to access these materials electronically:

WWW: <http://www.epa.gov/epaoswer/hazwaste/ldr>

FTP: <ftp://ftp.epa.gov>

Login: anonymous

Password: your Internet address

Files are located in /pub/epaoswer

The official record for this action will be kept in paper form. Accordingly, we will transfer all comments received electronically to paper form and place them in the official record.

The official record also will include all comments submitted in writing.

FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA Hotline at 800 424-9346 or TDD 800 553-7672 (hearing impaired). In the Washington, DC, metropolitan area, call (703) 412-9810 or TDD (703) 412-3323. For more detailed information on specific aspects of this document, contact Josh Lewis at (703) 308-7877 or lewis.josh@epa.gov, Office of Solid Waste (5302 W), U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460.

SUPPLEMENTARY INFORMATION:

I. Overview of Today's Action

In this document, EPA is informing the public of its intent to grant the petition of Pioneer Chlor-Alkali, Inc. ("Pioneer") for a site-specific determination of equivalent treatment (DET) for its Remerc process, a nonthermal mercury recovery process. Pioneer uses the Remerc process to treat its K106 waste, which is a wastewater treatment sludge from the mercury cell process used in chlorine production. Under current Resource Conservation and Recovery Act (RCRA) waste treatment regulations, the residuals from the Remerc process must be at or below 0.025 mg/L, as measured by the toxicity characteristic leaching procedure (TCLP), because these residuals, as generated, usually do not contain the 260 mg/kg total mercury necessary for

effective use of roasting or retorting. If the wastes exceed 0.025 mg/L TCLP, Pioneer must retreat the residuals until they meet the standard. However, Pioneer may not retreat any of its Remerc residuals that have concentrated the mercury to a concentration above 260 mg/kg total mercury, because they are now high mercury subcategory wastes, for which the standards require the use of roasting or retorting ("RMERC"), a thermal process.¹

If we grant this DET, we would recognize Remerc at Pioneer's facility as equivalent to RMERC. Pioneer would then be allowed to use Remerc to retreat its K106 high mercury residuals. Also, by virtue of this DET, Remerc residuals will be subject to 0.20 mg/L TCLP, which is the level that RMERC treatment residuals must meet.

We intend to grant this DET because Pioneer has adequately demonstrated that Remerc is equivalent to RMERC for the treatment of K106 wastes. This demonstration is based primarily on the following key factors: (1) Remerc has a comparable mercury recovery rate; (2) Remerc residuals are consistent with retort residuals, both in terms of total mercury content and mercury TCLP concentration; and (3) Remerc releases negligible amounts of mercury to the air and water.

Although we have not typically published DETs in the **Federal Register** for comment in the past, EPA wants to encourage the maximum amount of public involvement in our decision making. Therefore, we are publishing this document with a 21-day comment period. If we do not receive any adverse comments on this proposed DET, the DET will automatically take effect 30 days after the date of this document. However, if we do receive adverse comment(s), we will publish a timely notice in the **Federal Register** informing the public that this DET will not be automatically granted and indicating the further steps that will be taken.

II. What Is a Determination of Equivalent Treatment (DET)?

Under section 3004(m) of RCRA, EPA is required to set "levels or methods of

¹ Because the Remerc process is situated between the wastewater collection tank and the Shriver filter press, the waste initially being treated by the Remerc system is not actually K106 waste, because there is no point of generation until after the filter press. See section IV of this document for a complete description of Pioneer's treatment system. After the Shriver filter press, the waste is usually low mercury subcategory K106 waste, for which the mercury treatment standard is a TCLP of 0.025 mg/L. Occasionally, the residuals from Remerc treatment are above 260 mg/kg total mercury. In this case, at the point of generation, the waste is high mercury subcategory, which requires RMERC.

treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." EPA implements section 3004(m) by establishing treatment standards based on the performance of best demonstrated available technology (BDAT). This approach was upheld by the DC Circuit in *Hazardous Waste Treatment Council v. EPA*, 886 F.2d 355 (D.C. Cir. 1989).

When setting LDR treatment standards, we have generally established two types: (1) a numerical, concentration-based treatment limit for each constituent of concern, or (2) a method of treatment that must be used to treat a particular constituent or constituent(s). In either case, the treatment standard is based on the BDAT.

Under the second approach where a technology is specified as the treatment standard, EPA allows facilities to submit petitions (or applications) demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achievable by the EPA-specified method. This demonstration of equivalency, known as a Determination of Equivalent Treatment (DET) if approved, is typically both waste-specific and site-specific. Our approval is based on: (1) Demonstrations of equivalence for an alternative method of treatment based on a statistical comparison of technologies, including a comparison of specific design and operating parameters; (2) the development of a concentration-based standard that utilizes a surrogate or indicator compound that guarantees effective treatment of the hazardous constituents; and (3) the development of a new analytical method for quantifying the hazardous constituents.² Thus, in determining whether a technology is equivalent to the specified technology, EPA carefully evaluates the treatment process, including examining the characteristics of the residuals that are generated, and compares the performance of this alternative treatment process to the specified method of treatment. We also look at any other potential adverse environmental impacts, including releases to air and water. See *Chemical Waste Management v. EPA*, 976 F.2d 2, 17 (D.C. Cir. 1992), explaining the

² See 40 CFR 268.42(b) and the preamble for the Third Third Scheduled Wastes; Final Rule (55 FR 22536, June 1, 1990) for more information.

relevance of assessing releases to media other than land in determining whether treatment is minimizing threats, as required by RCRA section 3004 (m).

III. What Is the Current Treatment Standard for K106 Mercury Wastes?

EPA established treatment standards for K106 waste (wastewater treatment sludge from the mercury cell process used in chlorine production) as part of the LDR Third Third final rule (55 FR 22569, June 1, 1990). In this rule, EPA established two treatment subcategories for all mercury waste codes: a high mercury subcategory for wastes with a total mercury concentration greater than or equal to 260 mg/kg; and a low mercury subcategory for wastes with a total mercury concentration less than 260 mg/kg.

High mercury subcategory K106 wastes are required to be treated by roasting or retorting with recovery of mercury for reuse ("RMERC"). RMERC residues must then meet a numerical mercury treatment standard of 0.20 mg/L TCLP. Low mercury subcategory K106 wastes (that are themselves not RMERC residues) are not subject to a specific treatment technology and must only meet a numerical treatment standard of 0.025 mg/L mercury TCLP.

IV. Analysis of the Pioneer Application

A. The Grounds Presented by Pioneer

1. Description of Pioneer's K106 Waste and the Remerc process

The subject wastes are classified as K106 nonwastewaters, treatment sludges from wastewater systems that are part of the mercury cell process in chlorine production. Pioneer generates between 176 and 244 tons of these K106 wastes per year when manufacturing chlorine and caustic soda. In its application for a DET, Pioneer provides the following description of its Remerc process.³

"Mercury containing wastewater from various areas of the St. Gabriel plant is generated at a rate of approximately 65 million gallons per year. This wastewater is collected in an equalization tank. The wastewater is pumped from the equalization tank to a series of treatment tanks where sodium hydrosulfide (NaHS) is added and the pH adjusted to form a mercury sulfide precipitate. The wastewater is then directed to a Lamella settler, where the mercury sulfide particles concentrate toward the bottom while nearly particle-free water flows to the filter (called the

sluicing filter) where remaining particles are removed. The wastewater then flows through a carbon tower for final treatment before being discharged to the Mississippi River under the plant's NPDES/LPDES water discharge permit. The entire system consists of tank units connected by a pipe.

"Prior to 1996, the bottoms of the Lamella settler were pumped to a collection tank, as were solids (principally diatomaceous earth filter aid) back-flushed from the sluicing filters. The combined wastewater stream, containing approximately 10–15% solids, was then pumped to a Shriver filter press (a pressure leaf filter) for solids removal. The solids were then removed from the Shriver filter as a wastewater treatment sludge. The sludge generated at the Shriver filter was a high mercury K106 hazardous waste containing approximately 1.5–2% mercury. * * *.

"In upgrading the wastewater treatment system in 1996, the Remerc system was added between the wastewater collection tank and the Shriver filter press. The combined wastewater from the bottom of the Lamella settler and the back-flushing of the sluicing filters is now pumped to a leach tank, where a counter-current leaching solution removes a large percentage of the mercury. The leach solution then flows to a cementation stage, where metallic mercury is recovered and returned to the manufacturing process. The wastewater containing suspended solids continues to a thickener, which increases the solids content from approximately 2% to 6–10%. This stream then continues through a second leach tank, where more mercury is removed, and a second thickener. The stream then proceeds to a surge tank where NaHS is added to bind any remaining mercury, then to the Shriver filter press for solids removal and washing."⁴ The Shriver filter press sludge is K106 waste.

2. Description of Test Results

As part of its application, Pioneer submitted data on Remerc-treated waste from February 4 to March 31, 1999. Excluding data gathered during a process upset from March 15–18, 1999, the average total mercury content in the Remerc residuals is about 150 mg/kg, with an average TCLP concentration of 0.021 mg/L. Using the BDAT

⁴Mercury sulfide is the most insoluble of the mercury complexes. However, it can become soluble if two conditions are present: the surrounding environment is alkaline, and excess sulfide is present. The washing step at the end of the treatment process removes any excess sulfide from the K106 waste prior to disposal.

methodology,⁵ we find that RMERC residuals could meet a treatment standard of 0.046 mg/L TCLP.⁶

To calculate the mercury recovery rate, we looked at Pioneer's historical data showing the mercury concentrations in the untreated wastes,⁷ and we compared these data to data from Remerc-treated waste that were presented in Pioneer's DET application. Pioneer's historical data are from samples taken in 1993, 1994 and 1995, before the insertion of the Remerc process in 1996, and from 1997 when Pioneer had to bypass the Remerc process after it had been installed.⁸ The data show that Pioneer's untreated K106 waste is relatively consistent in terms of its total mercury content. The average mercury removal rate of the Remerc process is about 99%. During the worst case scenario (*i.e.*, when the untreated K106 waste had a mercury content of 9100 mg/kg), the Remerc process removes about 98.4% of the mercury.

3. Pioneer's Request for Relief

In its application, Pioneer asserts that its K106 Remerc residual is analogous to the K106 retort residue in that both wastes have similar total mercury and TCLP mercury levels, and both wastes are residues from processes designed to recover mercury for reuse. Furthermore, Pioneer notes that mercury emissions from Remerc to other media, including air and water, are negligible. However, Remerc residues are currently subject to an LDR standard of 0.025 mg/L TCLP, while retort residues have to meet a less stringent mercury TCLP of 0.20 mg/L. Furthermore, Remerc residues that are above 260 mg/kg total mercury are considered high mercury wastes, for which the current treatment standard is retorting, and not Remerc.

Pioneer requests a Hazardous Waste Determination of Equivalent Treatment

⁵BDAT Background Document for Quality Assurance/Quality Control Procedures and Methodology, October 23, 1991.

⁶See Memo from Josh Lewis, USEPA, to the Record, June 23, 1999 for the calculation of the Remerc residual standard using data submitted by Pioneer.

⁷As explained above, the Remerc process is situated between the wastewater collection tank and the Shriver filter press. Because of this set-up, Pioneer does not generate a K106 waste until the majority of the mercury is already removed from the waste (in contrast, at chlor-alkali facilities with on-site retort units, the K106 waste that will be generated after the filter press will still have all of the mercury in it). Taking this into account, we believe the best way to calculate the mercury recovery rate is to look at historical data showing the mercury concentrations in the untreated K106 wastes, and compare them to the mercury concentrations in the treated waste from the Pioneer DET application.

⁸See the August 11, 1999 letter from Dana Oliver, Pioneer, to Josh Lewis, USEPA for all of Pioneer's untreated K106 waste data.

³See Pioneer's Application for a Determination of Equivalent Treatment, which is in the docket to today's document, for more information on the Remerc process, including a flow diagram.

(DET) that: (1) Recognizes its Remerc process as equivalent to RMERC, so that Remerc can treat high mercury K106 wastes; and (2) subjects Remerc residues to a standard of 0.20 mg/L TCLP, the same as retorting residues. The Remerc residues will continue to be disposed in a subtitle C landfill because they remain a listed hazardous waste.

See Pioneer's Application for Determination of Equivalent Treatment, which can be found in the docket to today's document, for more details on Pioneer's request.

B. How Does Pioneer Satisfy the Criteria?

After careful review of the data and application submitted by Pioneer, we conclude that Pioneer has adequately demonstrated that its Remerc process is an equivalent treatment method to RMERC. We therefore propose to grant Pioneer's petition for the following reasons:

(1) Remerc removes comparable amounts of mercury from its K106 wastes. As mentioned above, Pioneer's Remerc process reduces the mercury content from about 15,000 mg/kg to about 150 mg/kg, which is a removal rate of about 99%. Both the mercury concentration in the untreated K106 and the mercury recovery rate are similar to the information presented in the "Final Best Demonstrated Available Treatment (BDAT) Background Document for Mercury-Containing Wastes D009, K106, P065, P092, and U151" (May 1990) and the Third Third final rule preamble (55 *FR* 22570, June 1, 1990). The BDAT Background Document states that K106 generated by sulfide precipitation contains approximately 4.4% mercury on average as mercury sulfide, with a range of 0.5% to 16% mercury. The Third Third final rule preamble states that, based on data from the thermal processing of cinnabar ores and the retorting or roasting of a mixture of K071 and K106 wastes, mercury retorting can recover 98–99% of mercury contained in the feed material.

(2) Remerc residues are consistent with RMERC residues. The Remerc residual's average mercury content of 150 mg/kg and its average TCLP of 0.021 mg/L are consistent with the data from the roasting and retorting of mercury-containing wastes in four processes examined during our BDAT evaluation.⁹ The BDAT Background Document presents data from a thermal recovery system that processes mercuric sulfide

ores for mercury recovery, a retorter treating K106 hydrazine sludge, a retorter treating a combined K071/K106 waste, and a retorter treating a K106 waste generated by sodium borohydride reduction and filtration. Furthermore, because Remerc residuals consistently have a total mercury content below 260 mg/kg and can achieve a TCLP well below the 0.20 mg/L limit, Remerc is operating in a manner consistent with the four BDAT retort units.

(3) Remerc does not release mercury to other environmental media. With regard to other possible environmental releases of mercury, air emissions from Remerc are negligible, as the entire Remerc system is enclosed and vented to a scrubber system, and the process is nonthermal. Stack sampling conducted in 1999 confirmed that less than 0.033 grams of mercury are released from the scrubber to the air per day.¹⁰ Furthermore, the Remerc system does not appear to adversely affect surrounding water bodies. Total mercury emissions to surrounding water bodies were 18 pounds both in 1995, the last full year before start-up of the Remerc process, and again in 1998, with the Remerc system in place.

(4) Other factors. In addition, Pioneer has also taken advantage of pollution prevention opportunities where possible. For example, the Remerc system uses spent sulfuric acid and hypochlorite solution from the tail gas neutralizer as reagents, which is beneficial use of byproduct materials from the main process.

C. Conditions of the Proposed DET

If we grant this DET, the following conditions would apply: (1) Remerc residuals at Pioneer's facility would have to meet a TCLP of 0.20 mg/L; (2) if Pioneer generates a high mercury subcategory K106 waste, it can be treated using the Remerc process; (3) after treatment to a mercury concentration of 0.20 mg/L TCLP, Pioneer may dispose of the treated K106 wastes in a RCRA subtitle C landfill assuming they meet any other applicable LDR treatment standards; (4) compliance with these standards would not relieve the facility from compliance with any other applicable treatment standards associated with this waste, including other applicable federal, state, or local requirements as specified in the facility's waste analysis plan; and (5) this DET would have no expiration date.

With regard to condition #5, one option we considered was whether to

have this DET expire after a certain time period because we are currently reevaluating all of the mercury LDR treatment standards, including the standards for RMERC and other treatment residuals.¹¹ We do not feel this expiration date is necessary because we will be examining the residuals from all mercury recycling technologies (e.g., RMERC and Remerc). If we change the residual treatment standard for some or all of these technologies, we will address the appropriate standard for Pioneer's Remerc residuals as well.

Dated: September 9, 1999.

Elizabeth A. Cotsworth,

Director, Office of Solid Waste.

[FR Doc. 99–24842 Filed 9–22–99; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–6443–3]

Clean Air Act Advisory Committee; Mobile Sources Technical Review Subcommittee; Notification of Public Advisory Subcommittee Open Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Pursuant to the Federal Advisory Committee Act, Public Law 92–463, notice is hereby given that the Mobile Sources Technical Review Subcommittee of the Clean Air Act Advisory Committee will meet on: Wednesday, October 13, 1999 from 9:00 a.m. to 3:00 p.m.; Eastern Standard Time (registration starts at 8:30 a.m.) at: Holiday Inn Washington—On The Hill, 415 New Jersey Avenue, NW, Washington, DC 20001, Ph: (800) 638–1166 or 202/638–1616, Fax: (202) 638–0707.

This is an open meeting and seating is on a first-come basis. During this meeting, the subcommittee may hear progress reports from some of its workgroups, updates and announcements on activities of general interest such as the Clean Air Act Advisory Committee, the future of the Subcommittee, key regulations, schedule for the MOBILE6 model, and presentations on the following subjects: toxicity of exhaust from diesel engines, ultra-fine particulate matter in the exhaust from diesel and gasoline-powered mobile sources, and recent developments in diesel after-treatment technology.

¹¹ See our ANPRM for a description of the issues we have with the current standards (64 *FR* 28949, May 28, 1999).

⁹ See the BDAT Background Document, which can be found in the docket supporting today's document, for the complete data sets from the roasting and retorting of these mercury-containing wastes.

¹⁰ See appendix IV of Pioneer's Application for a Determination of Equivalent Treatment, which contains the hypochlorite scrubber stack sampling report.