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# CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES QUALITY ASSURANCE SURVEILLANCE REPORT

PROJECT NO: 20.1402.159

REPORT NO: 2000-07

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**SURVEILLANCE SCOPE:** ICP and Ion Chromatography Testing in Division 01

**REFERENCE DOCUMENTS:** Individual work orders; Division 01 Procedure titled ICP-AE Spectrometric for Trace Elemental Analysis (TAP-01-0406-038); and Special Quality Assurance Quality Plan titled Performance of Chemical Analysis for Commercial Nuclear Power Plants By the Department of Environmental Chemistry.

**STARTING DATE:** March 2, 1999

**ENDING DATE:** April 13, 2000

**QA REPRESENTATIVE:** Mark R. Ehnstrom and Charles S. Butcher

**PERSONS CONDUCTING TEST/EXAM/ACTIVITY:** Division 01 employees K. Edrisi, J. Ranger, M. Maydwell, A. Tran, M. Garcia, and R. Spies

**SATISFACTORY FINDINGS:**

These 16 separate surveillances were performed in the Division 01 Environmental Chemistry test area. Individual work orders issued by CNWRA employees were used to convey required test information. The surveillances confirmed that the samples were correctly logged in and identified with sample number, purchase order number, work order number, and Nuclear labels. Surveillance confirmed that training records of individuals performing the tests were available. Calibrated equipment was used and, as required, control samples were run to validate the calibration. Attachment A contains copies of the surveillances performed along with other important information.

**UNSATISFACTORY FINDINGS:** None

**NONCONFORMANCE REPORT NO:** N/A

**ATTACHMENTS:** None

**RECOMMENDATIONS/ACTIONS:** None

APPROVED:

CENTER DIRECTOR OF QUALITY ASSURANCE

DATE:

4/25/2000

**DISTRIBUTION:**

ORIGINAL - CENTER QA DIRECTOR QA Records

ORIGINATOR: M. Ehnstrom

CNWRA SCIENTIST: J. PRIKRYL

ELEMENT MANAGERS: ALL

B. Sagar, H. Garcia



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INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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**Surveillance Scope:**  
Witness the Test for ICP and Ion Chromatography in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 15191 Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** March 2, 1999      **Ending Date:** March 2, 1999

**Institute QA Representative:** Charles Butcher CB

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, M. Garcia, R. Spies

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> _____	<b>Distribution:</b> oo: Original - SCD Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01)
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SURVEILLANCE REPORT

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**Surveillance Scope:**  
Witness the Test for ICP and Ion Chromatography in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 15430 Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** April 21, 1999      **Ending Date:** April 21, 1999

**Institute QA Representative:** Charles Butcher *CB*

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, M. Garcia

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b> <i>Mark R. Ehrstrom</i> Institute Quality Assurance <b>Date:</b> 5/25/99	<b>Distribution:</b> oo: Original - SCD Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01)
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INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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**Surveillance Scope:**  
Witness the Test for ICP and Ion Chromatography in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 15757 Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** May 28, 1999      **Ending Date:** June 18, 1999  
**Institute QA Representative:** Charles Butcher

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, M. Garcia

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. Sample were acidified, diluted, and run for metals. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

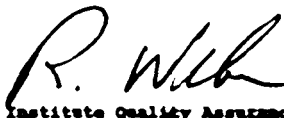
<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 6/29/99	<b>Distribution:</b> <b>cc:</b> Original - SCD Originator-CSB, MRE PM-M.Dammon (01) J. Boyd (01)
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INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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20-1402	1999-SR-0110	
<b>Surveillance Scope:</b> Witness the Test for ICP and Ion Chromatography in Division 01. The client is NRC High Level Waste Program.		
<b>Reference Documents:</b> The Work Order numbers 15803, 15804 Metals Analysis by ICP, and SPQP-CH/AN.		
Starting Date:	June 12, 1999	Ending Date: June 22, 1999
Institute QA Representative:	Charles Butcher <sup>CB</sup>	
Person(s) Conducting Test/Exam/Procedure: M. Garcia		
<b>Satisfactory Findings:</b> The work was logged in by receiving and a Div 01 work order was issued. The samples were labeled with the sample number and work order number. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.		
<b>Unsatisfactory Findings:</b> None		
Nonconformance Report No.:	N/A	CAR/SCAR No.: N/A
Attachments: None		
Recommendations/Actions: N/A		
<b>Equipment Calibration:</b> All equipment was verified for calibration prior to testing and is recorded on the data sheets.		
Approved:	 Institute Quality Assurance	Distribution: Original - SCD Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01)
Date:	6/29/99	

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INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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**Surveillance Scope:**  
Witness the Test for ICP and Ion Chromatography in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 15783 Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** June 04, 1999      **Ending Date:** July 16, 1999  
**Institute QA Representative:** Charles Butcher *CB*

**Person(s) Conducting Test/Exam/Procedure:** . M.Garcia, K. Edrisi

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. Samples were subjected to whole rock digestion, acidified, diluted, and run for metals. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.


**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 10/8/99	<b>Distribution:</b> Original - SCD Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01)
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October 15, 1999

To: File for Surveillance Report 99-SR-126

From: Mark R. Ehnstrom *MRE*

Subject: Lateness of review and acceptance of surveillance report 99-SR-126

On October 8, 1999 I was presented a surveillance report in which activities were completed July 16, 1999. I contacted the quality representative, Charles Butcher, to determine why this report was being submitted so much after the fact. Charles apologized to me and stated he had completed the surveillance in July, had written the report, and placed the report in his folder. After awhile it became buried in other paperwork and it never came to me for review and signature. When rediscovered on October 8, 1999, Charles immediately put the surveillance in the review cycle and it was signed. At the time of approval I discussed the situation with Charles and since there were no unsatisfactory findings identified, no harm resulted in the lateness of the review and distribution of the surveillance report.



INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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20-1402	1999-SR-0148	

**Surveillance Scope:**  
Monitor the Test for Ion Chromatography in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 16236 Metals Analysis by IC, and SPQP-CH/AN.

**Starting Date:** August 19, 1999      **Ending Date:** August 19, 1999

**Institute QA Representative:** Charles Butcher <sup>CB</sup>

**Person(s) Conducting Test/Exam/Procedure:** R. Spies

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technician performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instrument was calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAI/SCAI No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

**Approved:** *R. Webb*  
Institute Quality Assurance

**Date:** 9/2/99

**Distribution:**  
Original - SCD  
Originator-CSB, MRE  
PM-M. Dammon (01)  
J. Boyd (01)



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SURVEILLANCE REPORT

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**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 16186, Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** August 25, 1999      **Ending Date:** August 30, 1999

**Institute QA Representative:** Charles Butcher

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, J.Ranger

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 9/2/99	<b>Distribution:</b> Original - SCD Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01)
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### INSTITUTE QUALITY ASSURANCE SURVEILLANCE REPORT

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**Surveillance Scope:**  
Monitor the Test for Metals by ICP in Division 01. The client is NRC High Level Waste Program. This is a QA Nuclear surveillance.

**Reference Documents:**  
The Work Order number 16334, Metals Analysis by ICP and SPQP-CH/AN.

**Starting Date:** September 2, 1999      **Ending Date:** September 2, 1999  
**Institute QA Representative:** Charles S. <sup>CSB</sup>Butcher

**Person(s) Conducting Test/Exam/Procedure:** K. Edrisi, J. Ranger

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number, retention date, and QA Nuclear labels. The technicians performing the tests had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instrument was calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.


**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<p><b>Approved:</b>  Institute Quality Assurance</p> <p><b>Date:</b> 4/12/00</p>	<p><b>Distribution:</b> Original - SCD cc: <del>Originator</del>-CSB, RJS PM-M. Dammou (01) J. Boyd (01)</p>
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INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 16242, Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** August 25, 1999      **Ending Date:** September 08, 1999  
**Institute QA Representative:** Charles Butcher <sup>CB</sup>

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, J.Ranger, Anh Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CR/SCR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

**Approved:**

*Mark R. Ehnstrom*  
Institute Quality Assurance

**Date:**

9/23/99

**Distribution:**  
Original - SCD  
Originator-CSB, MRE  
PM-M. Dammon (01)  
J. Boyd (01)



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20-1402	1999-SR-0161	

**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 16271, Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** August 25, 1999      **Ending Date:** September 16, 1999

**Institute QA Representative:** Charles Butcher <sup>CA</sup>

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, J.Ranger, Anh Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CA/SCA No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 9/23/99	<b>Distribution:</b> Original - SCD Originator-CSB, MRE PM-M.Dammon (01) J. Boyd (01)
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INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT

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**Surveillance Scope:**  
Monitor the Test for ICP and IC in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 16305, Metals Analysis by ICP, Metals by IC, and SPQP-CH/AN.

**Starting Date:** September 02, 1999      **Ending Date:** September 16, 1999

**Institute QA Representative:** Charles Butcher

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, J.Ranger, R. Spies

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.


**Unsatisfactory Findings:** None

**Nonperformance Report No.:** N/A      **CMR/SCMR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 9/23/99	<b>Distribution:</b> Original - SCD Originator-CSB, MRE PM-M.Dammon (01) J. Boyd (01)
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### INSTITUTE QUALITY ASSURANCE SURVEILLANCE REPORT

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**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is NRC High Level Waste Program.

**Reference Documents:**  
The Work Order number 16393 Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** January 10, 2000      **Ending Date:** January 10, 2000

**Institute QA Representative:** Charles Butcher *CB*

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, A. Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. The data was reviewed and reported. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

**Approved:** *Mark R. Shustrom*  
Institute Quality Assurance  
**Date:** *January 12, 2000*

**Distribution:** Original - SCD  
**cc:** Originator-CSB, MRE  
PM-M. Dammon (01)  
J. Boyd (01)

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**INSTITUTE QUALITY ASSURANCE  
SURVEILLANCE REPORT**

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**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is NRC High Level Waste Program. This is a QA Nuclear work order.

**Reference Documents:**  
The Work Order numbers 16911, 17141, Metals Analysis by ICP, and SPQP-CH/AN.

**Starting Date:** January 10, 2000      **Ending Date:** March 7, 2000

**Institute QA Representative:** Charles Butcher <sup>CB</sup>

**Person(s) Conducting Test/Exam/Procedure:** K.Edrisi, A. Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. The technicians performing the test had training records as required. The data was reviewed and reported. The instruments were calibrated prior to testing and standards verified the method. The ICP instrument was calibrated and verified prior to running samples. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.

**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

**Approved:** *Mark R. Ernstom*  
Institute Quality Assurance

**Date:** 3/17/2000

**Distribution:** Original - SCD

**cc:** Originator-CSB, MRE  
PM-M. Dammon (01)  
J. Boyd (01)



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### INSTITUTE QUALITY ASSURANCE SURVEILLANCE REPORT

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**Surveillance Scope:**  
Witness the Test for ICP in Division 01. The client is the NRC High Level Waste Program. This is a QA Nuclear surveillance.

**Reference Documents:**  
The Work Order number 16731, Inductively Coupled Plasma/ Atomic Emission Spectrometric Method for Trace Elemental Analysis, and SPQP-CH/AN.

**Starting Date:** March 29, 2000      **Ending Date:** April 12, 2000  
**Institute QA Representative:** Charles S. Butcher

**Person(s) Conducting Test/Exam/Procedure:** K. Edrisi, M. Maydwell, A. Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. Samples were diluted and run for metals. The analysts performing the testing had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.


**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<p><b>Approved:</b>  Institute Quality Assurance</p> <p><b>Date:</b> 4/14/00</p>	<p><b>Distribution:</b> Original - SCD</p> <p><b>cc:</b> Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01) B. Mabrito (20)</p>
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### INSTITUTE QUALITY ASSURANCE SURVEILLANCE REPORT

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**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is the NRC High Level Waste Program. This is a QA Nuclear surveillance.

**Reference Documents:**  
The Work Order number 16732, Inductively Coupled Plasma/ Atomic Emission Spectrometric Method for Trace Elemental Analysis, and SPQP-CH/AN.

**Starting Date:** March 30, 2000      **Ending Date:** April 12, 2000  
**Institute QA Representative:** <sup>CSB</sup> Charles S. Butcher

**Person(s) Conducting Test/Exam/Procedure:** K. Edrisi, M. Maydwell, A. Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. Samples were diluted and run for metals. The analysts performing the testing had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by technician, project manager and division QA prior to transmittal to client.


**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 4/14/00	<b>Distribution:</b> Original - SCD cc: Originator-CSB, MRE PM-M. Dammon 01 J. Boyd (01) B. Mabrito (20)
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SURVEILLANCE REPORT**

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**Surveillance Scope:**  
Monitor the Test for ICP in Division 01. The client is the NRC High Level Waste Program. This is a QA Nuclear surveillance.

**Reference Documents:**  
The Work Order number 17668, Inductively Coupled Plasma/ Atomic Emission Spectrometric Method for Trace Elemental Analysis, and SPQP-CH/AN.

**Starting Date:** April 11, 2000      **Ending Date:** April 13, 2000  
**Institute QA Representative:** Charles S. Butcher      *CSB*

**Person(s) Conducting Test/Exam/Procedure:** . K. Edrisi, M. Maydwell, A. Tran

**Satisfactory Findings:** The work was logged in by receiving and labeled with PO number, QA requirements, project number, tests required, and method. The samples were labeled with the sample number, PO number, work order number and Nuclear labels. Samples were diluted and run for metals. The analysts performing the testing had training records as required. Copies of the work order, SPQP, and test procedures were available as required. The instruments were calibrated prior to testing and standards verified the method. Quality control samples were run to validate the calibration and the samples run. Data was reviewed by analysts.


**Unsatisfactory Findings:** None

**Nonconformance Report No.:** N/A      **CAR/SCAR No.:** N/A

**Attachments:** None

**Recommendations/Actions:** N/A

**Equipment Calibration:**  
All equipment was verified for calibration prior to testing and is recorded on the data sheets.

<b>Approved:</b>  Institute Quality Assurance <b>Date:</b> 4/14/00	<b>Distribution</b> Original - SCD cc: Originator-CSB, MRE PM-M. Dammon (01) J. Boyd (01) B. Mabrito (20)
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