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STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
DIVISION OF RADIATION PROTECTION  
*Airustrial Center, Bldg. 5 • P.O. Box 47827 • Olympia, Washington 98504-7827*

September 2, 1994

Mr. James Rasmussen, Acting Program Manager  
Office of Environmental Assurance,  
Permits, and Policy  
Department of Energy  
Richland Field Office  
P.O. Box 550 MSIN A5-15  
Richland, Washington 99352



Dear Mr. Rasmussen:

Enclosed is our report for the site-wide Quality Assurance Audit, conducted from August 15 through August 19, 1994. The audit concentrated on the overall Quality Assurance (QA) Program for the U.S. Department of Energy, Westinghouse Hanford Corporation, Pacific Northwest Laboratories and Bechtel Corporation.

The scope of the audit pertained to the overall operation of the QA Program, the adequacy of the QA Program, how it is implemented, and how corrective actions are carried out. Also included was an evaluation of training records of personnel associated with compliance to WAC 246-247. The audit was consistent with requirements in WAC 246-247-075, and 40 CFR 61 (NESHAPS) subparts H, method 114.

In the past, the Washington State Department of Health (WDOH) reported the results of an audit to the Department of Energy with categories of Findings I,II,III, Observations and Best Management Practices (BMP's). For this audit report there will only be Findings and BMP's to be consistent with WAC 246-247-080. Observations will not be used in order to avoid confusion with U.S. DOE's internal definition. Observations are now Level IV Findings.

All past WDOH audits, surveillance's and inspections that have had Observations will require a response from DOE in writing within 60 days from this letter. Past Observations will be treated as a Level IV Finding to require a response. A list of these open Findings still requiring a response is enclosed.

Mr. James Rasmussen  
September 2, 1994  
Page Two

Please respond to this audit within 60 days of receipt. If there are any questions please call me at (206)586-0254 or Randy Acselrod of my staff at (206)586-8950.

Sincerely,



Allen W. Conklin, Head  
Air Emissions and Defense Waste Section  
Division of Radiation Protection

AWC/RSA/jr

Enclosure: DOH Audit Report  
Audit Findings  
Open Surveillances/Audits/Inspections by Date Completed (Summary)  
Audit: Field Dates: 6/28/93 to 7/2/93  
Inspection PUREX - Field Dates: 8/10/93 to 8/12/93  
Inspection 291-U-1- Field Dates: 10/1/93 to 10/1/93  
Inspection Fast Flux Test Facility - Field Dates: 10/6/93 to 10/6/93  
Inspection 242-S Evaporator/SY Tank Farm-Field Dates: 1/30/93-12/1/93  
Inspection T Plant - Field Dates: 3/16/94 to 3/16/94

bcc: Leo Martinez, Bechtel  
Stephen J. Jette, Battelle  
Bradly G. Erlandson, WHC

# DEPARTMENT OF HEALTH AUDIT REPORT AUGUST 15-19, 1994

The overall assessment of the site-wide Quality Assurance Program is that it is above average. Westinghouse Hanford Corporation's Quality Assurance Organizations appear to be fragmented due to so many branches and could be more efficient. However, it appears to work adequately to fulfill the requirements of our program. This represents a significant improvement since our first audit in 1991.

Bechtel Corporation's Corrective Action Program is excellent. It has an overall outstanding Quality Assurance Program, that appears to be very cost efficient.

Pacific Northwest Laboratories' Quality Assurance Program is very good. The Corrective Action Tracking System was excellent and possibly should be reviewed and evaluated by other contractors for their use.

The Department of Health (DOH) uses Findings and Best Management Practices to classify deficiencies found during an audit. The classification system is defined as follows:

- ▶ **Finding (Category I):** This level of finding reflects actual public health implications; i.e., levels of releases that could cause excessive risk to the general public.
- ▶ **Finding (Category II):** This level of finding would indicate that compliance problems with the 10 mrem/yr standard could exist.
- ▶ **Finding (Category III):** This level of finding indicates that, although the facility is in compliance with the dose standard, they are out of compliance with other technical requirements. These areas could affect the final dose calculations.
- ▶ **Finding (Category IV):** This is an area of non-compliance that would not be expected to alter the dose calculations, but requires correction. This replaces Observations.
- ▶ **Best Management Practice (BMP):** This does not represent an area of non-compliance with specific regulations (or is minor), but is, in the opinion of the reviewers, an area that needs improvement.

The following are positive comments made by DOH staff that deserve to be mentioned in this report for the site-wide Quality Assurance Audit, August 15 - 19, 1994.

- \* The professionalism and expert advice from those assigned as escorts and also those interviewed was greatly appreciated.
- \* Westinghouse Hanford Corporation demonstrated significant improvements in their Health Physics Technician training and record keeping since our last audit.
- \* Problems found in the Priority Planning Grid (PPG) System are already being acted upon, after being brought to the attention of upper management.
- \* The QA Program at tank farms was significantly improved. All contacts with DOH were extremely helpful and cooperative.
- \* There is an excellent effort by tank farms and PFP QA to perform activities to close outstanding internal corrective actions.
- \* The integrated approach to site-wide problem solving is to be commended. This is the Automated Bar Coding of Air Samples at Hanford Program (ABCASH).
- \* DOE oversight of the 325 LAB was good.
- \* The access to documents and facilities was good. No problems were noted.
- \* DOE has recognized problems with the "Observation" definition and already has committed to correct them.

#### AUDIT RESULTS

<b>Category I Findings:</b>	None were identified.
<b>Category II Findings:</b>	None were identified.
<b>Category III Findings:</b>	Three were identified.
<b>Category IV Findings:</b>	One was identified.
<b>Best Management Practices:</b>	Three were identified.

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## AUDIT

Field Dates: 8/15/94 to 8/19/94

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Location: Sitewide Quality Assurance  
Area of Concern: Quality Assurance

Audit Number: 35  
Date Response Required: 10/14/94

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**FINDING III 1:** DOE-RL has failed to respond to WDOH audits, surveillances and inspections according to the timeline established in the reports. Findings specified as observations have been ignored in the past. This does not comply with requirements as defined in our cover letters. The word OBSERVATION as defined by WDOH requires a response.

REGULATORY BASIS: WAC 246-247-080(11), WAC 246-247-060, WAC 246-247-040, RCW70.98, RCW70.94

Discussion:

The term "observation" will no longer be used. We will refer all compliance issues as FINDINGS, which will require corrective action. BMP's will remain the same.

Desired Actions:

Treat all observations from past surveillances and audits as a FINDING LEVEL IV. The WDOH requires a response to all observations and findings from all past audits and surveillances.

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**FINDING III 2:** DOE-RL has not adequately distributed surveillance reports from WDOH to QA branches under contractor authority, which will enable a timely response. The contractor QA organizations responsible for tracking regulatory issues are not receiving the information from DOE-RL. Because of this deficiency, regulatory issues are not receiving the attention needed for corrective action.

REGULATORY BASIS: WAC246-247-080(11), WAC246-247-060, WAC246-247-040, RCW70.98, RCW70.94

Discussion:

none

Desired Actions:

Adequately re-align distribution list to include all QA branches.

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**FINDING III 3:** The Priority Planning Grid (PPG) rating system is not always compatible with regulatory issues. The system assigns WDOH items of concern low priority rating in most instances. This results in no response or corrective action, contrary to WDOH requirements.

REGULATORY BASIS: WAC 246-247-080(11), WAC246-247-060, WAC246-247-040, RCW70.98, RCW70.94.

Discussion:

NONE

Desired Actions:

Re-evaluate PPG system. Designate all WDOH Findings to require a written response within 45 days from the date of the report.

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**FINDING IV 1:** Bechtel's QA Program does not reference WDOH radionuclide air emissions requirements in QA documents and plans.

REGULATORY BASIS: WAC246-247-080(11), WAC246-247-060, WAC246-247-040, RCW70.98, RCW70.94

Discussion:

NONE

Desired Actions:

Revise documents to reflect WAC 246-247 requirements.

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BMP 1: Bechtel lacks sufficient staff to operate their QA program in the 100 areas.

Discussion:

none

Desired Actions:

Recommend hiring additional staff to better manage the demands of the QA program.

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BMP 2: PNL Laboratory Training Records were unclear in the area of required training. The records were difficult to comprehend or trace to the technicians responsible for performing the work.

Discussion:

Though training appeared to be adequate, the retrievability of the records needs improvement.

Desired Actions:

Recommend reorganization of training records.

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BMP 3: In the 325 Laboratory QA manual concerning QC analysis (10.2), listed laboratory control standards/ blank spikes as not being used in radiochemical analysis. Although that may be a true statement for analyzing air filters for alpha/beta/gamma, it is not true for other radiochemical analysis.

Discussion:

none

Desired Actions:

It is recommended that this standard be revised.

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## Open Surveillances/Audits/Inspections by Date Completed

01-Sep-94

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**A**Number: 2                      **Location:** USDOE sitewide                      **Date Reported:** 12/17/93  
**Date Started:** 6/28/93                      **Concern:** Calibration                      **Letter No:** Air 93-1207  
**Date Completed:** 7/2/93                      **Date Corrective Actions Received:** 7/5/94                      **AUDIT**  
**Date Issues Closed:**                      **Participants:** John Blacklaw

Johanna Berkey  
Don Peterson  
Ed Bricker  
Al Conklin  
Cindy Grant  
Craig Lawrence

# of Open Findings = 2 of 2  
# of BMPs = 1

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**A**Number: 5                      **Location:** PUREX                      **Date Reported:** 10/29/93  
**Date Started:** 8/10/93                      **Concern:** Compliance to regs                      **Letter No:** Air 93-1016  
**Date Completed:** 8/12/93                      **Date Corrective Actions Received:**                      **INSPECTION**  
**Date Issues Closed:**                      **Participants:** Don Peterson

Kathy Fox-Williams  
Cindy Grant

# of Open Findings = 1 of 1  
# of BMPs = 3

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**A**Number: 20                      **Location:** 340, 326, 327, 329 Bldgs                      **Date Reported:** 2/1/94  
**Date Started:** 8/23/93                      **Concern:** Compliance to regs                      **Letter No:** Air 94-202  
**Date Completed:** 8/23/93                      **Date Corrective Actions Received:**                      **INSPECTION**  
**Date Issues Closed:**                      **Participants:** John Blacklaw

Cindy Grant

# of Open Findings = 3 of 3  
# of BMPs = 0

---

**A**Number: 12                      **Location:** 291-U-1                      **Date Reported:** 10/27/93  
**Date Started:** 10/1/93                      **Concern:** Compliance to regs                      **Letter No:** Air 93-1023  
**Date Completed:** 10/1/93                      **Date Corrective Actions Received:**                      **INSPECTION**  
**Date Issues Closed:**                      **Participants:** Kathy Fox-Williams

Craig Lawrence

# of Open Findings = 5 of 5  
# of BMPs = 2

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**A**Number: 8                      **Location:** FAST FLUX TEST FACILITY                      **Date Reported:** 12/6/93  
**Date Started:** 10/6/93                      **Concern:** Stack Monitoring                      **Letter No:** Air 93-1104  
**Date Completed:** 10/6/93                      **Date Corrective Actions Received:**                      **INSPECTION**  
**Date Issues Closed:**                      **Participants:** John Blacklaw

Craig Lawrence

# of Open Findings = 2 of 2  
# of BMPs = 2

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## Open Surveillances/Audits/Inspections by Date Completed

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01-Sep-94

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<b>A Number:</b> 1	<b>Location:</b> 242-S Evaporator and SY Tank Fa	<b>Date Reported:</b> 1/7/94
<b>Date Started:</b> 11/30/93	<b>Concern:</b> General	<b>Letter No:</b> Air 94-101
<b>Date Completed:</b> 12/1/93	<b>Date Corrective Actions Received:</b>	<b>INSPECTION</b>
<b>Date Issues Closed:</b>	<b>Participants:</b> Cindy Grant Ed Bricker	
<b># of Open Findings = 3 of 3</b>		
<b># of BMPs = 4</b>		

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<b>A Number:</b> 16	<b>Location:</b> T Plant	<b>Date Reported:</b> 4/20/94
<b>Date Started:</b> 3/16/94	<b>Concern:</b> Compliance to regulations	<b>Letter No:</b> Air 94-409
<b>Date Completed:</b> 3/16/94	<b>Date Corrective Actions Received:</b>	<b>INSPECTION</b>
<b>Date Issues Closed:</b>	<b>Participants:</b> Craig Lawrence Johanna Berkey Kathy Fox-Williams	
<b># of Open Findings = 3 of 3</b>		
<b># of BMPs = 0</b>		

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<b>A Number:</b> 35	<b>Location:</b> Sitewide Quality Assurance	<b>Date Reported:</b> 8/26/94
<b>Date Started:</b> 8/15/94	<b>Concern:</b> Quality Assurance	<b>Letter No:</b>
<b>Date Completed:</b> 8/19/94	<b>Date Corrective Actions Received:</b>	<b>AUDIT</b>
<b>Date Issues Closed:</b>	<b>Participants:</b> Randy Acselrod Johanna Berkey John Blacklaw Ed Bricker Cindy Grant Craig Lawrence	
<b># of Open Findings = 4 of 4</b>		
<b># of BMPs = 3</b>		

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## AUDIT

Field Dates: 6/28/93 to 7/2/93

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Location: USDOE sitewide

Audit Number: 2

Area of Concern: Calibration

Date Response Required: 2/4/94

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Letter Number: Air 93-1207

Participants: John Blacklaw  
Johanna Berkey  
Don Peterson  
Ed Bricker  
Al Conklin  
Cindy Grant  
Craig Lawrence

**Comments:** Sitewide audit of the air monitoring instrumentation adequacy and calibration.

**Scope:**

- 1) Reviewing the calibration procedures for air monitoring instrumentation. This included calibrations performed in place and in the laboratory.
  - 2) Comparing the calibration procedures site-wide for consistency and compliance to appropriate standards.
  - 3) Observing calibrations to confirm proper implementation of procedures.
  - 4) Randomly verifying the calibration status of air monitoring equipment site-wide.
  - 5) Reviewing the quality assurance (QA) systems that insure instrumentation is adequately maintained and calibrated.
- 

**FINDING IV 1: Effective USDOE Quality Assurance (QA) oversight of its contractors and regulated activities at Hanford is lacking.**

REGULATORY BASIS: 40CFR61, WAC 246-247, WAC 246-247-080

**Discussion:**

USDOE has an established QA program with a limited staff to perform oversight of USDOE and contractor activities and programs. The oversight organization is understaffed, and lacks Health Physics and Engineering personnel trained to evaluate regulated radioactive air emissions issues. Audits, inspections and surveillances have been scheduled, but never performed due to reprioritization by management. This severely limits performance of the appraisal and assessment process.

Enforcement of oversight findings and corrective actions by USDOE and contractor organization has not been demonstrated. USDOE did not respond to corrective actions submitted by Battelle's Health Physics Department, Instrumentation and External Dosimetry (IED). USDOE also has not responded to I&ED's June 1992 correction action report.

DOH staff repeatedly asked "What type of oversight is USDOE furnishing?" No one interviewed could give a recent example of USDOE review.

The clear definition of QA responsibility was still not outlined as required in the first Quality Assurance Project Plan (QAPP). DOH just received a revised version of the QAPP. It is currently being reviewed. If the QAPP's were adequately developed, they would facilitate USDOE in carrying out their QA responsibilities.

**Desired Actions:**

- 1) Provide adequate funding and staff for QA oversight activity.
  - 2) Assure performance of appraisals and assessments. Other priorities must not interfere with this activity.
  - 3) USDOE QA/Environmental oversight group must develop better communications with DOH, to develop an oversight program that meets regulatory requirements. USDOE must assure a timely response to DOH audits and corrective actions.
  - 4) USDOE must develop and implement a QA structure that effectively supports the requirements of the NESHAPs QA methods. Specifically, QA oversight to assure the proper implementation and operation of activities instituted by the QAPP is necessary. This was initially determined in the previous audit. Corrective action is not evident. The QA group in USDOE chartered with QA and Environmental oversight has begun performing this function. This is commendable.
-

**FINDING IV 2:** USDOE Order 5700.6 C, QA is deficient. National Quality Assurance standards must be "required" rather than referenced as "additional interpretative guidance."

**REGULATORY BASIS:** RACT Standard (WAC 173-480, WAC 246-247, RCW 70.94) and Monitoring and reporting requirements (WAC 246-247-080) and Quality Assurance (40CFR61).

**Discussion:**

Revision of USDOE Order 5100.6 C on QA is in place and became fully implemented recently at Hanford. The order includes national standards as "additional interpretive guidance for development of quality assurance programs."

These standards include the following: ASME/NQA-1, ASME/NQA-2, ASME/NQA-3, ISO 9000, QAMS 004, QAMS 005 and others. Compliance to many of these standards should not be just guidance, they must be required.

These standards include the following: ASME/NQA-1 ASME/NQA-2, ASME?NQA-3, ISO9000, QAMS 004, QAMS 005 and others. Compliance to many of these standards should not be just guidance, they must be required.

**Desired Actions:**

1) Adopt a Hanford (RL) version of USDOE Order 5700.6 C for QA to include a requirement that the QA Program must follow national standards. Guidance does not carry the weight of a requirement. Require adoption of national standards.

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27007-276

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**INSPECTION**

Field Dates: 8/10/93 to 8/12/93

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**Location:** PUREX

**Audit Number:** 5

**Area of Concern:** Compliance to regs

**Date Response Required:** 12/17/93

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**Letter Number:** Air 93-1016

**Participants:** Don Peterson  
Kathy Fox-Williams  
Cindy Grant

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**Comments:** Thanks to Richard Berk for being responsiveness in implementing a better procedure for the HPT's to check and document sampling instrument calibration status.

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**FINDING III 1:** The health physics procedures document WHC-IP-0718 , which recently replaced WHC-IP-0692; does not contain any PUREX specific procedures such as the collection and exchange of record of samples.

**REGULATORY BASIS:** 40CFR part 61, Method 114.4

**Discussion:**

When the health physics procedures document WHC-IP-0718 replaced WHC-IP-0692, all Purex specific procedures were removed. The removed procedures are now being used as "desk top" procedures. This makes them non-auditable procedures. From a QA standpoint, this is unacceptable practice. This can result in questionable effluent data. (This policy change is not just applicable to Purex, but site-wide for Westinghouse facilities.) We are aware of the present negotiations on the Federal Facility Compliance Agreement (FFCA) with Environmental Protection Agency, however this particular non-compliance issue should not be affected.

**Desired Actions:**

Formalize the desk top procedures and make them Purex specific.

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## INSPECTION

Field Dates: 8/23/93 to 8/23/93

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Location: 340, 326, 327, 329 Bldgs

Audit Number: 20

Area of Concern: Compliance to regs

Date Response Required: 3/22/94

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Letter Number: Air 94-202

Participants: John Blacklaw  
Cindy Grant

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**Comments:** The surveillance included the following facilities in the 300 area: 340,326,327,328. Battelle's self-assessment program for compliance to the NESHAP's and DOH regulations is commendable.

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**FINDING IV 1:** Carbon absorber units inspected in the 340 building did not have test ports or inspection tags indicating efficiency test performance.

**REGULATORY BASIS:** RACT WAC 246-247, WAC 173-480, ASME codes AG-1, N-509, N-510

**Discussion:**

There was no evidence the carbon filters had been tested. Their effectiveness at removing and retaining radionuclides was unknown.

**Desired Actions:**

Explain any efficiency testing of maintenance and operating procedures that verify performance. Report to the Department.

---

**FINDING IV 2:** Electric preheater upstream of the main filter bank in 340 stack was not operating.

**REGULATORY BASIS:** Ract WAC 246-247, WAC 173-480

**Discussion:**

Upstream condenser does not preclude high humidity. The use of an electric heater at the ventilation system influent cannot guarantee humidity at the filters and absorbers is limited. Max relative humidity of 70-80% is recommended.

**Desired Actions:**

Operate the heater any time humidity approaches saturated condition. Humidity monitor or indirect indication of humidity may be used to assure humidity does not impact control devices.

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**FINDING IV 3:** Magnahelic pressure gages not calibrated.

**REGULATORY BASIS:** RACT WAC 246-247, WAC 173-480

**Discussion:**

None

**Desired Actions:**

Prepare and implement a corrective action plan that would calibrate the gages.

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# INSPECTION

Field Dates: 10/1/93 to 10/1/93

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Location: 291-U-1

Audit Number: 12

Area of Concern: Compliance to regs

Date Response Required: 12/15/93

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Letter Number: Air 93-1023

Participants: Kathy Fox-Williams  
Craig Lawrence

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**Comments:** Two observations and one best management practice. See AIR 93-1023 letter dated 10/27/93.

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**FINDING IV 1:** Carbon absorber unit did not have test ports or indication did not have test ports or inspection tags of efficiency test performance.

REGULATORY BASIS: RACT WAC 246-247, WAC 173-480, ASME codes AG-1, N-509, N-510

**Discussion:**

There was no evidence available during the inspection that carbon filters had been tested for effectiveness in removing or retaining absorbed radionuclides (iodine, ruthenium, or others).

**Desired Actions:**

Explain any efficiency testing of maintenance operation procedures that verify performance. If upgrades are necessary, prepare an upgrade plan and report progress to the Department.

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**FINDING IV 1:** Requested raw data for weekly 291-U-1 stack samples was provided without units. Data were inconsistent.

REGULATORY BASIS: WAC 246-247-80(2)

**Discussion:**

Dept. attempted to duplicate the reported emissions in 1991/1992 NESHAP report (DOE/RL-91-10-, 92-30). Much time was wasted trying to determine the units for the stack volume column.

**Desired Actions:**

Future requests for the weekly stack sample raw data, provide the units and raw data for each radionuclide reported in the NESHAP report.

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**FINDING IV 2:** Electric pre-heater upstream of the electric of main filter bank of the 340 building stack was not operating to eliminate humidity.

REGULATORY BASIS: RACT Engineering Standards WAC 246-247, WAC 173-480

**Discussion:**

The condenser upstream of the heater and HEPA filters and carbon absorbers to preclude high humidity in the filters and absorbers. Maximum relative humidity of 70-80% is recommended to protect integrity of the filters and absorbers.

**Desired Actions:**

Operate the heater any time the relative humidity approaches a saturated condition.

---

**FINDING IV 2:** 2: Independent duplication of results from the NESHAP reports was not consistent.

REGULATORY BASIS: WAC 246-247-80(2)

**Discussion:**

Results of our analysis show that the Strontium 90 results for 1991/1992 PU 239/240 were under reported in three instances.

**Desired Actions:**

Provide an explanation of why these results are not consistent.

---

FINDING IV 3: Magnahelix differential pressure gages were not calibrated. Both Battelle and Westinghouse facilities.

REGULATORY BASIS: RACT WAC 246-247, WAC 173-480

Discussion:

none

Desired Actions:

Corrective action plan should be consistent with the site wide calibration audit.

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## INSPECTION

Field Dates: 10/6/93 to 10/6/93

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Location: FAST FLUX TEST FACILITY

Audit Number: 8

Area of Concern: Stack Monitoring

Date Response Required: 1/24/94

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Letter Number: Air 93-1104

Participants: John Blacklaw  
Craig Lawrence

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**Comments:**

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**FINDING III 1:** In general all facilities inspected had no calibration indication (tags) on monitoring instrumentation

REGULATORY BASIS: WAC 246-247 (40) and WAC 173-480

**Discussion:**

Calibration is necessary to meet the monitoring requirements. Calibration tagging is required for field verification of calibration.

**Desired Actions:**

Prepare and implement a calibration plan consistent with findings from the departments' recent site wide audit on calibration.

---

**FINDING III 2:** Some monitoring instruments have difficulty remaining in calibration due to vendor problems (obsolete components, vendors out of business).

REGULATORY BASIS: WAC 246-247 (40) and WAC 173-480

**Discussion:**

none

**Desired Actions:**

Verify that a monitoring system with the necessary reliability and performance is operating to adequately monitor emissions.

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## INSPECTION

Field Dates: 1/30/93 to 12/1/93

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Location: 242-S Evaporator and SY Tank Farm

Audit Number: 1

Area of Concern: General

Date Response Required: 2/25/94

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Letter Number: Air 94-101

Participants: Cindy Grant  
Ed Bricker

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Comments: Many improvements to the tank farm since last surveillance

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**FINDING IV 1:** All Beta CAMs in SY Tank Farm were overdue on their monthly functional tests.

REGULATORY BASIS: WAC 173-480-050 (1)

**Discussion:**

From a functional standpoint it is imperative that these beta CAMs be monitored periodically to ensure performance. This failure was due in part to the recent change in procedures from the old Health Physics Manual WHC-IP-0692, to the new WHC-IP-0718.

**Desired Actions:**

- \* Perform all maintenance necessary to bring out of date "functional test" CAMs into compliance.
  - \* Evaluate the effectiveness and justification of monthly CAM functional test.
  - \* Evaluate and document the impact to all monitoring equipment, that has taken place as a result of the recent change from Health Physics Manual WHC-IP-0692, to the new WHC-IP-0718 manual.
- 

**FINDING IV 2:** Steam has not been supplied to the SY Tank Farm Exhauster inlet filter pre-heater for over a year.

REGULATORY BASIS: WAC 173-480-050

**Discussion:**

The steam used to heat the inlet air to the SY exhauster filters has been out since October of 1992. The resulting increase in moisture has caused an increased loading of the filters.

**Desired Actions:**

- \* Evaluate and document the effect of current conditions on filter integrity.
- 

**FINDING IV 3:** Three differential pressure (DP) gauges have expired calibration dates on their calibration stickers. One calibration sticker had been physically removed.

REGULATORY BASIS: WAC 173-480-050

**Discussion:**

Two SY tank farm DP gauges (DPI-2-1, DPI-3-1) have not been calibrated since September 28, 1993. A pisces job card was not generated to perform this work. Differential Pressure gauge DPI-3-2 was due for calibration on June 28, 1993. At that time an isolation valve necessary to perform this calibration was found to be missing. A job request #2W-93-361 was generated for this valve installation and instrument calibration. No work has been done to this date.

**Desired Actions:**

Please evaluate, document, install the valve and calibrate the gauges.

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# INSPECTION

Field Dates: 3/16/94 to 3/16/94

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Location: T Plant

Audit Number: 16

Area of Concern: Compliance to regulations

Date Response Required: 6/8/94

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Letter Number: Air 94-409

Participants: Craig Lawrence  
Johanna Berkey  
Kathy Fox-Williams

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Comments: One finding, Two observations

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**FINDING III 1:** A review of the 1993 weekly sample results for 291-T-1 revealed missing data for a total of 20 weeks.

REGULATORY BASIS: WAC 246-247-075 Monitoring Testing and Quality Assurance

Discussion:

The following time frames are missing from the 291-T-1 sample results:

12/23/92 ----> 01/01/94 2 weeks  
01/13/93 ----> 02/08/93 3 weeks  
04/14/93 ----> 06/07/93 7 weeks  
06/16/93 ----> 06/21/93 1 week  
06/30/93 ----> 07/05/93 1 week  
08/31/93 ----> 09/14/93 2 weeks  
10/20/93 ----> 11/10/93 4 weeks

Desired Actions:

Provide an explanation for the missing data. If the 291-T-1 stack operated during these weeks, establish a QA system that ensures that the record sample results are accurate, and that they are included in the annual total.

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**FINDING IV 1:** The 296-T-13 sampler operates regardless of the status of the ventilation system. With the vent fan off, and the sampler operating normally, emissions are not representative.

REGULATORY BASIS: WAC 246-247-075 Monitoring Testing and Quality Assurance

Discussion:

none

Desired Actions:

Only operate the duct sampler when the ventilation system is turned on in that duct.

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**FINDING IV 2:** Loss of negative pressure with rail road doors open could result in fugitive emission of radioactive material.

**REGULATORY BASIS:** WAC 246-247 - 075 Monitoring Testing and Quality Assurance

**Discussion:**

The building's negative pressure decreases when the rail road doors are open.

Administrative controls were said to be in place to "monitor" the pressure gauge when the doors are opened. Presently the only corrective action is to close the doors. An occurrence is declared if the building pressure goes positive.

Negative pressure can be maintained with the doors open and the backup ventilation system 296-T-13 Stack operating concurrently with the 296-T-1 main stack ventilation system. There is said to be no delta pressure switch for the back-up ventilation to start-up when the doors open to prevent positive building pressure.

A power operator is required to turn on the back-up ventilation system. This operator must be requested for this operation. There are no administrative controls in place to have a power operator on standby when the rail road doors are opened.

**Desired Actions:**

Incorporate a delta pressure switch in the 296-T-13 stack fan with a set point greater than reporting level for pressure drop, or establish administrative controls to have a power operator on standby in contact with the delta pressure gauge monitor.  
Establish a radiation sampling station outside the rail road doors when the doors are opened.

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## CORRESPONDENCE DISTRIBUTION COVERSHEET

Author

Addressee

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Subject: RE: SITEWIDE QUALITY ASSURANCE AUDIT

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