



**U. S. LABS**

U.S. Laboratories Inc.

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REGION 1

'04 NOV -1 AIO :23

October 28, 2004

Control No. 135268

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION 1  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

**SUBJECT: RESPONSES AND CORRECTIVE ACTIONS TO NRC AUDIT OF  
SEPTEMBER 22 AND 23, 2004.**

**ATTN: Kathy Dolce Modes, Donna M. Janda**

- All personnel have been retrained to assure that gauges are double locked (source and transport case) at all times when being transported or stored.
- Gizaw Makuria has received a written warning and retraining regarding security of gauges, personnel monitoring and transport packages.
- All gauge operators have received additional training on September 24, 2004. Subjects included the following: Gauge security, personnel monitoring, limit of exposure to all, operation technique, residential storage, gauge container labeling, jobsite storage and signage regulations, and transport package requirements.
- Gauge # 33316 is new this year and has not required outside maintenance. Gauge # 10230 has not required any outside maintenance. Other gauge records enclosed.

We have enclosed additional documentation you had requested during your audit in Rahway, NJ on September 22-23, 2004 and during our conference call of October 27, 2004.

- 1) RSO designation letter (License amendment to follow).
- 2) Follow up letter regarding stolen vehicle with gauge.
- 3) Responses to internal audit of May 3-4, 2004.
- 4) Training records for 9-24-04 (Post NRC audit).
- 5) Dosemetry report for 2<sup>nd</sup> quarter 2004.

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- 6) Chris Connelly exposure explanation.
- 7) Letter to Landauer, Re: Jimmy Sobrera, badge #0191, 3<sup>rd</sup> Qtr, 04.
- 8) Non-routine maintenance records for Gauges 817, 1270 & 1087
- 9) Letter assigning ARSO's
- 10) Internal audit for 2003 with responses.
- 11) Depositions from Gizaw Makuria and Harshad C. Patel

Respectively Yours,

Martin H. Mygrant  
Radiation Safety Officer  
U.S. Laboratories, Inc.

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**U.S. LABS**

**To:** All Employees  
**From:** Marty Lowenthal, Regional Chief Executive  
**Date:** October 21, 2004  
**Subject:** Radiation Safety Officer

Martin H. Mygrant – Rahway, NJ office has been designated as the company radiation safety officer and will assume the duties and responsibilities that include ensuring the following.

- Company compliance with federal, state, DOT regulations and the company's radiations program.
- Stopping licensed activities that the RSO considers unsafe.
- Possession, use, storage, and maintenance of sources and gauges are consistent with the limitations in the license, the Sealed Source and Device Registration sheet(s), and manufacturer's recommendations and instructions.
- Individuals using gauges are properly trained.
- When necessary, personnel monitoring devices are used and exchanged at the proper intervals; records of the results of such monitoring are maintained.
- Gauges are properly secured.
- Proper authorities are notified in case of accident, damage to gauges, fire, or theft.
- Unusual occurrences involving the gauge (e.g., accident, damage) are investigated, cause(s) and appropriate corrective action are identified, and corrective action is taken.
- Audits are performed at least annually and documented, and corrective actions taken.
- Licensed material is transported in accordance with all applicable *DOT* requirements.
- Licensed material is disposed of properly.
- Appropriate records are maintained.
- Up-to-date license is maintained and amendment and renewal requests submitted in a timely manner.

Sincerely,

Martin B. Lowenthal  
Regional Chief Executive  
MBL/ mhm



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September 30, 2004

PEICO-U.S. Laboratories  
11860 West State Road 84, Suite 1  
Fort Lauderdale, Florida 33325

**Attention:** Rafael E. Silva, Director – Training, Safety, & Health

**Reference:** Stolen Vehicle with Portable Density Gauge in Trunk

Dear Mr. Silva:

On the morning of August 30, 2004, a call was made to the Elizabeth Police Department to insure the report filed on the previous day regarding the theft of a 1992 Honda Accord included the fact that a radioactive source was in the vehicle when it was stolen.

Upon receipt of this information, the search for this vehicle was greatly intensified. The Region I office of the Nuclear Regulatory Commission was notified immediately.

At 6:30 P.M. on Monday, August 30, 2004, our operations manager, Chandrakant Patel was notified by the F.B.I. that the vehicle had been found and the gauge was in the trunk and intact. Chandrakant Patel traveled to Irvington, New Jersey and met with local, state, and federal officials. At approximately 8:30 P.M., Chandrakant Patel took possession of the density gauge (#7142) and transported the gauge back to our storage facility at 903 E. Hazelwood Avenue, Rahway, New Jersey.

All responsible parties were notified of the outcome of this incident

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September 30, 2004  
Page 2

If you have any questions, please do not hesitate to contact our office.

Sincerely,  
U.S. Laboratories, Inc.

Martin Mygrant  
Assistant Radiation Safety Officer

**Attachments:**

Original report from Nehro Shahat

961 East Hazelwood Avenue  
Rahway, New Jersey 07065  
Phone: 732-382-3553 Fax: 732-382-3840

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## INSPECTION REPORT

Project Name (per plans) \_\_\_\_\_

Name : Nehro M. Shahat

Address : 316 Williamson St.  
Elizabeth, NJ, 07202.Job name : West Essex H. School -  
W. Green Brook Rd.  
N. Caldwell, NJ.I picked up Gauge [~~#~~ 7142] Fri. 8/27.I kept this gauge in trunk my car for  
Early Mon. Am Job.

Sunday In the morning at 7:00 Am (08/29/04)

When I go to pick up my car from the street, I no  
find my car in the same time, I called (911), When  
Police man coming he did report and I told.him inside my car gauge (~~#~~ 7142)

My Car :-

Honda accord 92 4 Doors

Dark Blue

Plate No.

MFR 17 K

Sgt.

Nehro Shahat



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September 30, 2004

PEICO-U.S. Laboratories  
11860 West State Road 84, Suite 1  
Fort Lauderdale, Florida 33325

**Attention:** Rafael E. Silva, Director – Training, Safety, & Health

**Reference:** Radiation Safety Audit 5/3,4/04

**Subject:** Response to Deficiencies

Dear Mr. Silva:

**XVIII. Audit Deficiencies and Corrective Actions**

- A.1. The Rahway utilization log was reviewed a second time and it was found that the users were signing gauges in or out on the wrong pages therefore indicating lapses in utilization. Users have been retrained in log usage.
- A.2. Internal audits revealing violations have been addressed on a case by case basis with the individual responsible (i.e., user, manager, ARSO, etc.). Resolutions include verbal warning and training for 1<sup>st</sup> offense, written warning, retraining for 2<sup>nd</sup> offense & termination of employee or employee usage of gauges for 3<sup>rd</sup> offenses.
- A.3. Employees who had signed out gauges and had not been issued badges, had only transported equipment, and did not use the gauges, therefore, exposure levels were not at levels which would have mandated personal monitoring. Personal transporting gauges did receive the required Hazmat and Radiation Safety Training.
- 1. B. The RSO (Richard Hanvey) has assigned an ARSO (Assistant Radiation Safety Officer) at the Rahway, NJ, Atlantic City, NJ, and Broomall, PA officers as noted on memo dated 7/1/04 (attached).

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September 30, 2004  
Page 2

1. C. The posting of information at the Broomall facility has been amended to include the name + emergency contact number of the RSO and emergency procedures.

If you have any questions, please do not hesitate to contact our office.

Sincerely,  
U.S. Laboratories/Inc.

Martin Mygrant  
Assistant Radiation Safety Officer

1001 E. 17th Avenue, Suite 100  
Fort Lauderdale, FL 33305  
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# RADIATION PROTECTION PROGRAM AUDIT CHECKLIST



## I. INTRODUCTION

This form documents performance of the **U.S. Labs** radiation protection program audit required by U.S. Labs. The audit consists of a review of the program's content and implementation, evaluating its effectiveness in complying with regulatory requirements and keeping radiation exposures to workers and the general public as low as reasonably achievable (ALARA). Records of annual audits must be available for inspection by the U.S. Labs Corporate Radiation Safety Officer.

License Name: U.S. Labs

License No.: 29-30107-01 Expires: 1/31/2014 Date of Audit: May 3-4, 2004

Auditor: Ralph E. Silva, Corporate RSO

(name, title)

(signature)

Management Review: Martin B. Lowenthal, Regional Chief Executive

(name, title)

(signature)

## II. AUDIT HISTORY

A. Last audit conducted on (date): April 30, 2004

B. Any deficiencies noted?..... **Yes**

C. Were corrective actions taken?..... **Yes**  
(look for signs of recurrence)

D. Brief description of prior deficiencies, corrective actions taken: \_\_\_\_\_

Leak tests not being performed are scheduled to be performed by May 7, 2004

A few gauges were not being signed back in the Daily Utilization Log. As a result the RSO indicated to the technician operating the gauge on a face to face meeting that this was not acceptable and required the user to properly log the gauge info back in.

## **RADIATION PROTECTION PROGRAM AUDIT CHECKLIST**

### **III. ORGANIZATION AND SCOPE OF PROGRAM**

- A. If the mailing address or permanent address changed, has the license been amended to reflect the change? ..... **N/A**    Yes    No
- B. If ownership has changed or bankruptcy has been filed, was the NRC notified? ..... **N/A**    Yes    No
- C. Does the license authorize all sources & devices possessed? ..... **Yes**    No
- D. Do all temporary job sites meet regulatory definition (serve only one contract, open for less than 18 months)? ..... **Yes**    No
- E. If no to A., has the NRC been notified? ..... **N/A**    Yes    No
- F. If the RSO has changed, has the license been amended to identify the new RSO? ..... **N/A**    Yes    No
- G. Is the RSO meeting the duties & responsibilities for the position? ..... **Yes**    No
- H. Is company management appropriately involved with the radiation protection program & oversight of the RSO's activities? ..... **Yes**    No
- I. Does RSO have sufficient time to perform all duties/responsibilities? ..... **Yes**    No
- J. Staffing sufficient to support to rad. protection program? ..... **Yes**    No

### **IV. MEMBER OF PUBLIC (MOP) DOSE LIMITS**

- A. Has a MOP dose compliance study been developed, submitted & approved by the NRC? ..... **Yes**    No
- B. Have licensed activities changed during the year to increase likelihood of public dose limits being exceeded? ..... **Yes**    No
- C. If yes to B., has a new MOP study been performed to demonstrate compliance with MOP dose limits is still being achieved? ..... **N/A**    Yes    No

### **V. TRAINING PROGRAM**

- A. All workers likely to exceed 100 mrem/yr provided radiation awareness training ? ..... **Yes**    No
- B. All gauge Authorized Users (AUs) completed 8 hrs of NRC approved training (or are supervised by trained AUs)? ..... **Yes**    No
- C. Hazmat employee training provided to workers per 49 CFR Part 172? ..... **Yes**    No
- D. Field observations of gauges operators demonstrate use of safe work practices & compliance with regulatory requirements? ..... **N/A**    Yes    No

F A T H E R

|   |
|---|
| <b>RADIATION PROTECTION PROGRAM AUDIT CHECKLIST</b> |
|---|

**VI. PERSONNEL MONITORING (PM)**

**A. If PM is conducted:**

1. PM badges worn properly & protected from heat, light, moisture & chemicals when not being worn? ..... Yes No
2. PM badges consistently stored with the control badge in a protected location when not in use? ..... Yes No
3. Are badges exchanged in a timely fashion to ensure accurate dosimetry reports? ..... Yes No
4. Any badges lost or damaged? ..... Yes No
5. If yes to 4., was RSO immediately notified & record of worker's estimated dose provided to badge vendor and kept on file? ..... Yes No
6. Any spare badges assigned to workers? ..... Yes No
7. If yes to 6., were spare badges marked to identify worker it was assigned to, & vendor notified to add spare badge dose to worker's occupational exposure total? ..... Yes No
8. Are dosimetry reports reviewed by the RSO upon receipt? ..... Yes No
9. Upon hiring, female workers provided instructions regarding radiation risk to embryo/fetus and procedure for declared pregnancies, and documentation of receipt of instructions maintained on file? ..... N/A Yes No
10. Female workers declaring pregnancy document their declaration, are provided instructions regarding monitoring and limiting the dose to the embryo/fetus, and receipt of instructions documented? ..... N/A Yes No
11. For workers that have declared pregnancies, records kept demonstrating embryo/fetus dose < 50 mrem for gestation period? ... N/A Yes No
12. Annual & termination reports provided to workers? ..... Yes No
13. PM records reviewed from (dates): \_\_\_\_\_ to \_\_\_\_\_
14. Highest annual dose: \_\_\_\_\_ mR Date: \_\_\_\_\_
15. Occupational exposures within limits? ..... Yes No
16. Do PM records indicate that worker doses are being kept ALARA? ..... Yes No

## **RADIATION PROTECTION PROGRAM AUDIT CHECKLIST**

### **VII. POSTING AND LABELING**

A. Following documented posted at permanent facility:

- 1. Emergency procedures ..... Yes No
- 2. "Notice to Employees" ..... Yes No

B. Above documents posted in conspicuous location(s) to permit workers to observe them on way to/from work? ..... Yes No

C. Radiation signs:

- 1. "Caution (or Danger), Radioactive Material" signs: posted at permanent facility & job sites where gauges are stored? ..... Yes No
- 2. "Caution (or Danger), Radiation Area" signs: Is manufacturers' information kept on file to demonstrate that gauge radiation levels are too low to require posting of radiation area signs around gauge storage areas? ..... Yes No

D. Gauges bear durable, clearly visible labels w/ radiation symbol, "Caution (or Danger), Radioactive Material" warning, & sufficient information to permit individuals to avoid/minimize exposures? ..... Yes No

### **VIII. SECURITY**

A. Each gauge provided a storage/transport container equipped w/ lock/seal? ..... Yes No

B. Minimum of two locks always used to prevent access to gauges? ..... Yes No

C. Gauges kept secured against unauthorized access/removal when not under direct surveillance? ..... Yes No

D. Extra precautions used to deter theft (e.g., concealing gauges from view during transport/storage, maintaining elevated level of awareness in high crime areas? ..... Yes No

### **IX. OPERATING AND EMERGENCY (O&E) PROCEDURES**

A. Any revisions to O&E procedures made that have not been reviewed & approved by the NRC? ..... Yes No

B. O&E procedures list correct phone numbers for RSO & NRC? ..... Yes No

C. O&E procedures accompany portable gauges at all times? ..... Yes No

**X. GAUGE TRANSPORTATION**

- A. Gauges transported to job sites are prepared & transported in same manner as when offered to third party for shipment? ..... Yes No
- B. Only DOT-7A or other authorized packages used to transport gauges?..... Yes No
- C. Packages used to ship gauges properly marked & labeled per 49 CFR Part 172, Subparts D & E? ..... Yes No
- D. Shipping containers properly locked, blocked & braced prior to transport?..... Yes No
- E. Prior to shipment, transport containers inspected to ensure proper packaging, unimpaired physical condition of container & closure devices? ..... Yes No
- F. Properly completed bill of lading & emergency response information provided for each gauge shipment? ..... Yes No
- G. Shipping papers & emergency response information immediately accessible to driver during shipment of gauges? ..... Yes No

**XI. GENERAL RULES OF USE**

- A. Management & RSO emphasize to workers importance of maintaining doses ALARA? ..... Yes No
- B. Field observations of workers conducted to evaluate performance?..... Yes No
- C. Good work practices used by workers to minimize doses (i.e., time, distance, shielding, general use rules)?..... Yes No

**XII. LEAK TESTS**

- A. Gauge sealed sources leak tested at required intervals?..... Yes No
- B. Leak tests conducted by authorized personnel following procedures approved by the NRC? ..... Yes No
- C. Leak test records include all information required by NRC? ..... Yes No
- D. Any sources found leaking, & if so, was the NRC notified?..... Yes No

**XIII. GAUGE INVENTORY**

- A. Gauge receipt & transfer/disposal records maintained?..... Yes No
- B. Gauges physically inventoried at 6-month intervals? ..... Yes No
- C. Gauge inventory records document all necessary information?..... Yes No

**XIV. GAUGE MAINTENANCE**

- A. Copies of the manufacturer's operation/maintenance manuals maintained on file for reference? ..... Yes No
- B. Manufacturer's procedures referenced & followed for routine cleaning & lubrication of gauges?..... Yes No
- C. Non-routine gauge maintenance performed in-house?..... Yes No
- D. If yes to C., is non-routine gauge maintenance conducted by authorized personnel following procedures approved by the NRC? ..... N/A Yes No

**XV. RADIATION SURVEY INSTRUMENTS**

- A. If a survey meter is not possessed, are specific plans in place to have one available when needed? ..... N/A Yes No
- B. If a survey meter is possessed:
1. Has the meter been approved by the NRC? ..... Yes No
  2. Is there access to an equivalent back-up meter when the primary meter is out for calibration/repair? ..... Yes No
  3. Is the meter calibrated annually & after repair by a licensed vendor, & are calibration records maintained?..... Yes No

**XVI. RECORD KEEPING, NOTIFICATIONS & REPORTS**

- A. All required documents maintained on file at permanent facility for duration specified by the NRC? ..... Yes No
- B. Did any incidents/emergencies occur since last audit? ..... Yes No
- C. If yes to B., was the response appropriate? (i.e., operator followed emergency procedures, required notifications/reports timely filed, cause of incident investigated, corrective actions taken & documented?..... Yes No N/A

**XVII. INDEPENDENT AUDITS/INSPECTIONS**

- A. Any independent audits/inspections conducted since last internal audit (e.g., consultant or NRC inspection)? ..... Yes No
- B. If yes to A., summary of deficiencies identified & corrective actions taken: \_\_\_\_\_

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## **XVIII. AUDIT DEFICIENCIES AND CORRECTIVE ACTIONS**

A. Summary of problems/deficiencies identified during this audit: \_\_\_\_\_

1. Review of the Rahway office Daily Utilization Log revealed that several employees did not completely sign out or sign back in the Nuclear Density Gauges (NDG). This is a major violation of existing standard operating procedures that can lead to NRC fines, sanctions and if it's a recurring problem, it could lead to the revoking of the radioactive materials license by the NRC.
  2. Periodic internal audits have been performed at the Rahway facility revealing a variety of violations, however, a review of the corrective actions taken revealed an incomplete pattern of resolution. Such non-conformances must be addressed promptly, resolved within a reasonable time frame and adequately documented. Failure to do so violates the ALARA policy and its commitment by the company's management organization. This is a serious violation that may result in fines by the NRC.
  3. Review of the Rahway office Daily Utilization Log revealed that some employees which had not been issued dosimetry badges (personal or spares) were allowed to operate the NDGs. This is also a major violation of existing standard operating procedures within the radiation safety program that can lead to NRC fines and/or the revoking of the radioactive materials license by the NRC.
-

**XVIII. AUDIT DEFICIENCIES AND CORRECTIVE ACTIONS** (contd.)

**B. Description of corrective actions planned or taken:** \_\_\_\_\_

- ☐ It is highly recommended that an assistant RSO be designated at the Rahway, Atlantic City and Broomall U.S. Labs facilities. These assistant RSOs should be sent to an 8-hour formal Radiation Safety Officer training course provided by Troxler (NDG Manufacturer). These individuals should be selected by the RSO and also trained on the existing in-house radiation safety program requirements.
- \_\_\_\_\_

**C. Description of other recommendations for improvement:** \_\_\_\_\_

- The RSO name, emergency contact number and emergency procedures must also be clearly posted on the door of the radioactive materials storage area at the Broomall facility.
  - All gauges (actual metal housing housing of the device) at the Rahway, Atlantic City and Broomall facilities should bear durable, clearly visible labels w/ radiation symbol, "Caution (or Danger), Radioactive Material" warning of & sufficient information to permit individuals to avoid/minimize exposures.
- \_\_\_\_\_



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139 N. Iowa Avenue  
Atlantic City, New Jersey 08401  
Tel: 609-344-3200 Fax: 609-344-2125



903 East Hazelwood Avenue  
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814 Parkway Boulevard  
Broomall, Pennsylvania 19008  
Tel: 610-543-3925 Fax: 610-543-1933

## RADIATION SAFETY MEETING QUARTERLY

Location: RAHWAY, NJ Date: 9.24.04

4:30 PM 4TH QTR MEETING 9/24/04

1. ☐ Agreement States or Nuclear Regulatory Commission (NRC) Rules and Regulations Parts 19, 20, 21, 30, 34, & 71
2. ☐ Agreement States or nuclear Radioactive Material License.
3. ☐ Radiographic equipment and detection instrumentation to be used.
4. ☒ The Operating and Emergency Procedures.
5. ☒ Fundamentals of Radiation Safety.
6. ☒ Prevention of overexposures to personnel.
7. ☐ NRC Case Histories.
8. ☒ Training in the transfer, packing and transport of radioactive material.
9. ☒ Security of Radioactive material.
10. ☒ Other: NEW

DISCUSSED SECURITY OF GAUGES. RECENT NRC AUDIT  
AND FINDINGS. UPDATING OF PACKETS

### EMPLOYEES ATTENDING

1. Kayur Dave
2. SHASHI PATEL
3. KAUSHIK PATEL
4. Suryakant Patel
5. Wagdi Abdalla
6. Kuldeep Sharma
7. AMIT DESAI
8. LITHMAN LAMAL
9. HARSHAD C PATEL
10. RANA TAHIR
11. HUSSAIN SAFRI
12. ALAM KHORSHED
13. GIZAN MAXURIA
14. BISHONIT PATEL
15. KEVAL KALIA

16. Adam Angelo
17. Mike
18. Neena Chhabra
19. SYED ABBAS
20. A.C. TADIFA
21. MAHER AWAN
22. Don Brown
23. JIMMY SOBREA
24. MARTIN MYGRANT
25. AL PHILLIPS
26. CHANDRABANT PATEL
27. George Stubbs
28. George Stubbs
29. Mr. A. ELVIS
30.

Instructor: MARTIN MYGRANT

Hours: 2 HOURS

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903 E HAZELWOOD  
RAHWAY NJ 07065

# LANDAUER®

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## RADIATION DOSIMETRY REPORT

| ACCOUNT NO | CLIENT CODE | ANALYTICAL WORK ORDER | REPORT DATE | DOSIMETER RECEIVED | REPORT TIME IN WORK DAYS | PAGE NO |
|------------|-------------|-----------------------|-------------|--------------------|--------------------------|---------|
| 141015     |             | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 1       |

| PARTICIPANT<br>NUMBER  | NAME         |               |     | DOSIMETER | USE           | RADIATION<br>QUALITY | DOSE EQUIVALENT (MREM)<br>FOR PERIODS SHOWN BELOW |            |                | YEAR TO DATE<br>DOSE EQUIVALENT (MREM) |            |                | LIFETIME<br>DOSE EQUIVALENT (MREM) |            |                | RECORDS<br>FOR YEAR | INCEPTION<br>DATE (MM/YY) |
|------------------------|--------------|---------------|-----|-----------|---------------|----------------------|---|------------|----------------|--|------------|----------------|------------------------------------|------------|----------------|---------------------|---------------------------|
|                        | ID<br>NUMBER | BIRTH<br>DATE | SEX |           |               |                      | DEEP<br>DDE                                       | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                            | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                        | EYE<br>LDE | SHALLOW<br>SDE |                     |                           |
| FOR MONITORING PERIOD: |              |               |     |           |               |                      | 01/01/04 - 03/31/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                           |
| 00177                  |              |               |     | P         | WHBODY        | *PH                  | 60  | 60         | 60             | 60                                     | 60         | 60             | 113                                | 112        | 114            | 2                   | 07/02                     |
| 00182                  |              |               |     | P         | WHBODY        | *PH                  | 213   | 213        | 213            | 213                                    | 213        | 213            | 547                                | 544        | 545            | 2                   | 04/03                     |
| FOR MONITORING PERIOD: |              |               |     |           |               |                      | 04/01/04 - 06/30/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                           |
| 00000                  |              |               |     | P         | CNTRL         |                      | M   | M          | M              |  |            |                |                                    |            |                | 3                   | 04/94                     |
|                        |              |               |     | T         | CNTRL         |                      | M   | M          | M              |  |            |                |                                    |            |                |                     |                           |
| 00002                  |              |               |     | P         | WHBODY        | PH                   | 41  | 40         | 39             | 295                                    | 294        | 288            | 1957                               | 1956       | 1934           | 2                   | 04/94                     |
| 00008                  |              |               |     | P         | CHEST<br>NOTE |                      |   |            |                |  |            |                | 380                                | 380        | 395            | 2                   | 08/94                     |
| 00011                  |              |               |     | P         | CHEST<br>NOTE |                      |   |            |                |  |            |                | 1780                               | 1778       | 1765           | 2                   | 04/95                     |
| 00029                  |              |               |     | P         | WHBODY        | PH                   | 34  | 33         | 31             | 82                                     | 81         | 58             | 900                                | 801        | 895            | 2                   | 07/97                     |
| 00031                  |              |               |     | P         | WHBODY        | PH                   | 57  | 58         | 54             | 114                                    | 113        | 110            | 1504                               | 1503       | 1473           | 2                   | 07/97                     |
| 00038                  |              |               |     | P         | CHEST<br>NOTE |                      |   |            |                | 9                                      | 9          | 8              | 118                                | 115        | 112            | 2                   | 01/98                     |
| 00044                  |              |               |     | P         | WHBODY        | PH                   | 207   | 206        | 200            | 207                                    | 206        | 200            | 431                                | 430        | 421            | 2                   | 07/98                     |
|                        |              |               |     |           |               |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |

M: MINIMAL REPORTING SERVICE OF 1 MREM

\* - NO CONTROL SUBTRACTED

QUALITY CONTROL RELEASE: VVG

1 - PR 8089 - RPT1318- N1

- 26850

NVLAP  
NVLAP CODE 000160

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RAHWAY NJ 07065

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## RADIATION DOSIMETRY REPORT

| WORK ORDER | DATE | ANALYTICAL WORK ORDER | REPORT DATE | DOSIMETER RECEIVED | REPORT TIME IN WORK DAYS | PAGE NO |
|------------|------|-----------------------|-------------|--------------------|--------------------------|---------|
| 141015     |      | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 2       |

| PARTICIPANT<br>NUMBER  | NAME   |               |        | DOSIMETER | USE    | RADIATION<br>QUALITY | DOSE EQUIVALENT (MREM)<br>FOR PERIODS SHOWN BELOW |            |                | YEAR TO DATE<br>DOSE EQUIVALENT (MREM) |            |                | LIFETIME<br>DOSE EQUIVALENT (MREM) |            |                | RECORDS<br>FOR YEAR | INCEPTION<br>DATE (MM/YY) |
|------------------------|--|---------------|--------|-----------|--------|----------------------|---|------------|----------------|--|------------|----------------|------------------------------------|------------|----------------|---------------------|---------------------------|
|                        | ID<br>NUMBER   | BIRTH<br>DATE | SEX    |           |        |                      | DEEP<br>DDF                                       | EYE<br>LDF | SHALLOW<br>SDE | DEEP<br>DDE                            | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                        | EYE<br>LDE | SHALLOW<br>SDE |                     |                           |
| FOR MONITORING PERIOD: |  |               |        |           |        |                      | 04/01/04 - 06/30/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                           |
| 00049                  |  | P             | WHBODY | PH        | 33     | 32                   | 30  | 52         | 51             | 48                                     | 1421       | 1420           | 1398                               | 2          | 01/99          |                     |                           |
| 00050                  |  | P             | CHEST  |           | UNUSED |                      |   |            |                |  | 251        | 253            | 258                                | 2          | 04/99          |                     |                           |
| 00056                  |  | P             | CHEST  |           |        |                      |   |            |                |  | 1444       | 1433           | 1424                               | 1          | 04/99          |                     |                           |
| 00060                  |  | P             | WHBODY | P         | 30     | 29                   | 28  | 89         | 88             | 88                                     | 863        | 859            | 851                                | 2          | 04/99          |                     |                           |
| 00067                  |  | P             | WHBODY | P         | 10     | 9                    | 9   | 29         | 29             | 29                                     | 764        | 758            | 750                                | 2          | 07/99          |                     |                           |
| 00071                  |  | P             | WHBODY |           | M      | M                    | M   | 4          | 4              | 3                                      | 188        | 158            | 155                                | 2          | 07/99          |                     |                           |
| 00074                  |  | P             | WHBODY | P         | 4      | 3                    | 3   | 4          | 3              | 4                                      | 315        | 314            | 315                                | 2          | 07/00          |                     |                           |
| 00082                  |  | P             | WHBODY |           | M      | M                    | M   | M          | M              | M                                      | 1463       | 1457           | 1433                               | 2          | 04/01          |                     |                           |
| 00086                  |  | P             | CHEST  |           |        |                      |   | M          | M              | M                                      | 206        | 207            | 205                                | 2          | 04/01          |                     |                           |
| 00088                  |  | P             | WHBODY |           | M      | M                    | M   | M          | 2              | 2                                      | 334        | 337            | 332                                | 2          | 04/01          |                     |                           |
| 00099                  |  | P             | WHBODY | PH        | 31     | 31                   | 31  | 31         | 31             | 31                                     | 219        | 218            | 218                                | 2          | 01/01          |                     |                           |
| 00108                  |  | P             | CHEST  |           |        |                      |   | 8          | 8              | 8                                      | 311        | 312            | 310                                | 2          | 07/01          |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
|                        |  |               |        |           |        |                      |   |            |                |  |            |                |                                    |            |                |                     |                           |
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| ANALYST NO | SERIAL NO | ANALYTICAL WORK ORDER | REPORT DATE | DOSIMETER RECEIVED | REPORT TIME IN WORK DAYS | PAGE NO |
| 141015     |           | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 3       |

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| 141015     |             | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 4        |

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## RADIATION DOSIMETRY REPORT

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|------------|-------------|-----------------------|-------------|--------------------|--------------------------|---------|
| 141015     |             | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 5       |

| PARTICIPANT<br>NUMBER  | NAME         |               |     | DOSIMETER | USE           | RADIATION<br>QUALITY | DOSE EQUIVALENT (MREM)<br>FOR PERIODS SHOWN BELOW |            |                | YEAR TO DATE<br>DOSE EQUIVALENT (MREM) |            |                | LIFETIME<br>DOSE EQUIVALENT (MREM) |            |                | RECORDS<br>FOR YEAR | INCEPTION<br>DATE (MM/YY) |
|------------------------|--------------|---------------|-----|-----------|---------------|----------------------|---|------------|----------------|--|------------|----------------|------------------------------------|------------|----------------|---------------------|---------------------------|
|                        | ID<br>NUMBER | BIRTH<br>DATE | SEX |           |               |                      | DEEP<br>DDE                                       | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                            | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                        | EYE<br>LDE | SHALLOW<br>SDE |                     |                           |
| FOR MONITORING PERIOD: |              |               |     |           |               |                      | 04/01/04 - 08/30/04                               |            |                | 2004                                   |            |                |                                    |            |                |                     |                           |
| 00169                  |              |               |     | P         | WHBODY        | P                    | 14  | 13         | 13             | 43                                     | 42         | 41             | 584                                | 582        | 570            | 2                   | 01/02                     |
| 00171                  |              |               |     | P         | CHEST<br>NOTE |                      | ABSENT  |            |                | 38                                     | 38         | 38             | 516                                | 517        | 503            | 2                   | 01/02                     |
| 00172                  |              |               |     | P         | CHEST<br>NOTE |                      | UNUSED  |            |                | 28                                     | 28         | 26             | 638                                | 639        | 637            | 2                   | 01/02                     |
| 00173                  |              |               |     | P         | CHEST<br>NOTE |                      | ABSENT  |            |                | 41                                     | 41         | 39             | 355                                | 355        | 350            | 2                   | 01/02                     |
| 00177                  |              |               |     | P         | CHEST<br>NOTE |                      | UNUSED  |            |                | 60                                     | 60         | 60             | 113                                | 112        | 114            | 3                   | 07/02                     |
| 00178                  |              |               |     | P         | WHBODY        |                      | M   | M          | M              | M                                      | M          | M              | 89                                 | 89         | 88             | 2                   | 07/02                     |
| 00179                  |              |               |     | P         | CHEST<br>NOTE |                      | ABSENT  |            |                | 6                                      | 7          | 7              | 355                                | 357        | 351            | 2                   | 07/02                     |
| 00180                  |              |               |     | P         | WHBODY        | P                    | 4   | 3          | 3              | 4                                      | 3          | 3              | 216                                | 214        | 211            | 2                   | 07/02                     |
| 00184                  |              |               |     | P         | WHBODY        | P                    | 7   | 8          | 8              | 7                                      | 8          | 8              | 7                                  | 8          | 8              | 2                   | 04/03                     |
| 00185                  |              |               |     | P         | WHBODY        | P                    | 19  | 19         | 17             | 58                                     | 56         | 52             | 248                                | 249        | 241            | 2                   | 04/03                     |
| 00186                  |              |               |     | P         | CHEST<br>NOTE |                      | ABSENT  |            |                | M                                      | M          | M              | 206                                | 207        | 205            | 2                   | 04/03                     |
| 00187                  |              |               |     | P         | CHEST<br>NOTE |                      | ABSENT  |            |                |  |            |                | 99                                 | 99         | 96             | 2                   | 04/03                     |

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| ACCOUNT NO | SERIES CODE | ANALYTICAL WORK ORDER | REPORT DATE | DOSIMETER RECEIVED | REPORT TIME IN WORK DAYS | PAGE NO. |
|------------|-------------|-----------------------|-------------|--------------------|--------------------------|----------|
| 141015     |             | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 6        |

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## RADIATION DOSIMETRY REPORT

| EXAMINEE NO | TESTS DONE | ANALYTICAL WORK ORDER | REPORT DATE | DOSIMETER RECEIVED | REPORT TIME IN WORK DAYS | PAGE NO |
|-------------|------------|-----------------------|-------------|--------------------|--------------------------|---------|
| 141015      |            | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 7       |

| PARTICIPANT<br>NUMBER  | NAME         |               |     | DOSIMETER | USE           | RADIATION<br>QUALITY | DOSE EQUIVALENT (MREM)<br>FOR PERIODS SHOWN BELOW |            |                | YEAR TO DATE<br>DOSE EQUIVALENT (MREM) |            |                | LIFETIME<br>DOSE EQUIVALENT (MREM) |            |                | RECORDS<br>FOR YEAR | INCEPTION<br>DATE (MM/YY) |
|------------------------|--------------|---------------|-----|-----------|---------------|----------------------|---|------------|----------------|--|------------|----------------|------------------------------------|------------|----------------|---------------------|---------------------------|
|                        | ID<br>NUMBER | BIRTH<br>DATE | SEX |           |               |                      | DEEP<br>DDL                                       | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                            | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                        | EYE<br>LDE | SHALLOW<br>SDE |                     |                           |
| FOR MONITORING PERIOD: |              |               |     |           |               |                      | 04/01/04 - 06/30/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                           |
| 00199                  |              |               |     | P         | WHBODY        |                      | M   | M          | M              | M                                      | M          | M              | M                                  | M          | 1              | 2                   | 04/03                     |
| 00200                  |              |               |     | P         | WHBODY        | P                    | 18  | 18         | 18             | 31                                     | 31         | 30             | 31                                 | 31         | 31             | 2                   | 04/03                     |
| 00201                  |              |               |     | P         | CHEST<br>NOTE |                      | ABSENT  |            |                | 23                                     | 23         | 22             | 23                                 | 23         | 22             | 2                   | 04/03                     |
| 00202                  |              |               |     | P         | WHBODY        | PH                   | 289   | 288        | 281            | 289                                    | 288        | 281            | 289                                | 288        | 281            | 2                   | 04/03                     |
| 00203                  |              |               |     | P         | CHEST<br>NOTE |                      | UNUSED  |            |                | 52                                     | 52         | 52             | 110                                | 109        | 110            | 2                   | 04/03                     |
| 00205                  |              |               |     | T         | WHBODY        | P                    | 11  | 11         | 11             | 37                                     | 37         | 38             | 37                                 | 37         | 38             | 2                   | 10/03                     |
| 00206                  |              |               |     | T         | WHBODY        | P                    | 21  | 20         | 18             | 24                                     | 23         | 20             | 24                                 | 23         | 20             | 2                   | 10/03                     |
| 00207                  |              |               |     | P         | WHBODY        |                      | M   | M          | M              | M                                      | M          | M              | M                                  | M          | M              | 2                   | 01/04                     |
| 00208                  |              |               |     | P         | WHBODY        | PH                   | 98  | 97         | 95             | 131                                    | 130        | 128            | 131                                | 130        | 128            | 2                   | 01/04                     |
| 00209                  |              |               |     | P         | WHBODY        | PH                   | 70  | 69         | 68             | 70                                     | 69         | 68             | 70                                 | 69         | 68             | 2                   | 01/04                     |
| 00210                  | P            | WHBODY        | P   | 4         | 3             | 3                    | 44  | 44         | 44             | 44                                     | 44         | 44             | 2                                  | 01/04      |                |                     |                           |

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|------------|-------------|-----------------------|-------------|--------------------|--------------------------|---------|
| 141015     |             | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 8       |

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| 141015     |             | 0426880450            | 10/12/04    | 09/24/04           | 12                       | 9       |

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|------------------------|--------------|---------------|-----|-----------|-------|----------------------|---|------------|----------------|--|------------|----------------|------------------------------------|------------|----------------|---------------------|--------------------------|-------|
|                        | ID<br>NUMBER | BIRTH<br>DATE | SEX |           |       |                      | DEEP<br>DDE                                       | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                            | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                        | EYE<br>LDE | SHALLOW<br>SDE |                     |                          |       |
| FOR MONITORING PERIOD: |              |               |     |           |       |                      | 07/01/04 - 09/30/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                          |       |
| 00050                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                |  |            |                | 251                                | 253        | 256            | 3                   | 04/99                    |       |
| 00058                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                |  |            | 1444           | 1433                               | 1424       | 2              | 04/99               |                          |       |
| 00067                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                | 29                                     | 29         | 29             | 764                                | 758        | 750            | 3                   | 07/99                    |       |
| 00088                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                | M                                      | M          | M              | 206                                | 207        | 205            | 3                   | 04/01                    |       |
| 00141                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                | 21                                     | 21         | 20             | 921                                | 919        | 917            | 3                   | 10/01                    |       |
| 00149                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                |  |            |                | 692                                | 687        | 681            | 3                   | 10/01                    |       |
| 00161                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                |  |            |                | 314                                | 313        | 306            | 3                   | 01/02                    |       |
| 00172                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                | 28                                     | 28         | 26             | 638                                | 639        | 637            | 3                   | 01/02                    |       |
| 00210                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                | 44                                     | 44         | 44             | 44                                 | 44         | 44             | 3                   | 01/04                    |       |
| FOR MONITORING PERIOD: |              |               |     |           |       |                      | 10/01/04 - 12/31/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                          |       |
| 00038                  |              |               |     | Pa        | CHEST |                      | UNUSED  |            |                |  | 9          | 9              | 8                                  | 116        | 115            | 112                 | 4                        | 01/98 |
|                        |              |               |     |           | NOTE  |                      |   |            |                |  |            |                |                                    |            |                |                     |                          |       |

M: MINIMAL REPORTING SERVICE OF 1 MREM

QUALITY CONTROL RELEASE: VVG

1 - PR 8089 - RPT1318- N1

- 26850

NVLAQ  
1704110000 10051000

U S ENGINEERING LABS  
903 E HAZELWOOD  
RAHWAY NJ 07065

# LANDAUER®

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586  
Telephone: (708) 755-7000 Facsimile: (708) 755-7016  
www.landauerinc.com



luxel®

## RADIATION DOSIMETRY REPORT

| XXXXXXXXXX | SERIES<br>NAME | ANALYTICAL WORK ORDER | REPORT DATE | DOSIMETER<br>RECEIVED | REPORT TIME<br>IN WORK DAYS | PAGE<br>NO |
|------------|----------------|-----------------------|-------------|-----------------------|-----------------------------|------------|
| 141015     |                | 0426880450            | 10/12/04    | 09/24/04              | 12                          | 10         |

\*\* LAST PAGE \*\*

| PARTICIPANT<br>NUMBER  | NAME         |               |     | DOSIMETER | USE   | RADIATION<br>QUALITY | DOSE EQUIVALENT (MREM)<br>FOR PERIODS SHOWN BELOW |            |                | YEAR TO DATE<br>DOSE EQUIVALENT (MREM) |            |                | LIFETIME<br>DOSE EQUIVALENT (MREM) |            |                | RECORDS<br>FOR YEAR | INCEPTION<br>DATE (MM/YY) |
|------------------------|--------------|---------------|-----|-----------|-------|----------------------|---|------------|----------------|--|------------|----------------|------------------------------------|------------|----------------|---------------------|---------------------------|
|                        | ID<br>NUMBER | BIRTH<br>DATE | SEX |           |       |                      | DEEP<br>DDE                                       | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                            | EYE<br>LDE | SHALLOW<br>SDE | DEEP<br>DDE                        | EYE<br>LDE | SHALLOW<br>SDE |                     |                           |
| FOR MONITORING PERIOD: |              |               |     |           |       |                      | 10/01/04 - 12/31/04                               |            |                |  | 2004       |                |                                    |            |                |                     |                           |
| 00050                  |              |               |     | Pa        | CHEST |                      |   |            |                |  |            |                | 251                                | 253        | 256            | 4                   | 04/99                     |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00111                  |              |               |     | Pa        | CHEST |                      |   |            | M              | M                                      | M          | 725            | 722                                | 719        | 3              | 07/01               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00136                  |              |               |     | Pa        | CHEST |                      |   |            | M              | M                                      | M          | 241            | 238                                | 239        | 3              | 10/01               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00141                  |              |               |     | Pa        | CHEST |                      |   |            | 21             | 21                                     | 20         | 921            | 919                                | 917        | 4              | 10/01               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00188                  |              |               |     | Pa        | CHEST |                      |   |            | M              | M                                      | M          | 6              | 6                                  | 7          | 3              | 04/03               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00193                  |              |               |     | Pa        | CHEST |                      |   |            | M              | M                                      | M          | 5              | 4                                  | 5          | 3              | 04/03               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00199                  |              |               |     | Pa        | CHEST |                      |   |            | M              | M                                      | M          | M              | M                                  | 1          | 3              | 04/03               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |
| 00210                  |              |               |     | Pa        | CHEST |                      |   |            | 44             | 44                                     | 44         | 44             | 44                                 | 44         | 4              | 01/04               |                           |
|                        |              |               |     |           | NOTE  |                      | UNUSED  |            |                |  |            |                |                                    |            |                |                     |                           |

M: MINIMAL REPORTING SERVICE OF 1 MREM

QUALITY CONTROL RELEASE: VVG

1 - PR 8089 - RPT1318- N1

- 26850

NVLAP

10/14/04 10:00:00

U.S. LABORATORIES, INC.

Page \_\_\_\_\_ of \_\_\_\_\_

Date \_\_\_\_\_

### INSPECTION REPORT

Project Name (per plans) \_\_\_\_\_

TO WHOM IT MAY CONCERN: RE: RADIATION SAFETY BADGE

RECENTLY I WAS INTERVIEWED BY MY IMMEDIATE SUPERIOR IN REGARD TO A HIGH READING ON MY BADGE. I WAS INFORMED THAT MINE WAS OUTSIDE THE NORM BUT NOT AT A RISK LEVEL. BELOW IS STATED WHAT I REPORTED

I HAVE BEEN EMPLOYED BY U.S.E.L. FOR 13 YEARS, I HAVE USED A NUCLEAR GAUGE FROM THE START. WHEN TRAVELING ANY GAUGE I HAVE USED HAS BEEN TRANSPORTED IN THE REAR PASSENGER SIDE OF MY PICK-UP & SECURED (LOCKED) TO THE BED.

WHEN IN USE MY BADGE IS EITHER IN OR ON MY SHIRT POCKET. WHEN MY GAUGE IS NOT IN USE I STORE MY BADGE INSIDE A BRIEFCASE ON THE PASSENGER SEAT OF MY PICK-UP.

ANY QUESTIONS YOU MAY HAVE FEEL FREE TO ASK

SINCERELY



10-21-04



**U.S. LABS**

U.S. Laboratories Inc.

October 26, 2004

LANDAUER  
2 Science Road  
Glenwood, Illinois 60425-1586

ATTENTION: DOSEMITRY

Regarding badge # 0191 - [REDACTED], we discovered that the technician inadvertently dropped his badge into the gauge transport case for a short period of time. The readings from the 2<sup>nd</sup> quarter do not accurately depict his exposure. We request that you estimate his 2<sup>nd</sup> quarter dose rate based on his exposure history and issue an addendum to the October 12, 2004 report.

Thank you for your cooperation in this matter.

Sincerely,

Martin Mygrant  
Radiation Safety Officer  
U.S. Laboratories, Inc.

3000 E. Hazelwood Dr.  
Bldg. 1, New Jersey 07097  
Phone: (201) 355-1111

Offices Nationwide  
[www.uslaboratories.com](http://www.uslaboratories.com)

## InstroTek North East

78 South Main St.  
 Newtown, CT 06470  
 203-426-0200  
 203-270-3582 Fax

## Invoice

| Date      | Invoice # |
|-----------|-----------|
| 3/17/2003 | 1405      |

|  |
|--|
| <b>Bill To</b>   |
| US Engineering<br>Mike Bottalico<br>443 Commerce Lane<br>West Berlin, NJ 08091 |

|  |
|--|
| <b>Ship To</b>   |
| US Engineering<br>Mike Bottalico<br>814 Parkway Blvd<br>Broomall, PA 19008 |

|             |             |                              |           |               |            |          |
|-------------|-------------|------------------------------|-----------|---------------|------------|----------|
| P.O. Number | Terms       | Rep                          | Ship      | Via           | F.O.B.     | Project  |
| Mike        | Net 30      | PCP                          | 3/17/2003 | Motor Freight |            |          |
| Quantity    | Item Code   | Description                  |           |               | Price Each | Amount   |
| 1           | 3 Block 8-2 | 3 BLOCK CALIBRATION 8/2      |           |               | 250.00     | 250.00   |
| 1           | H200149     | Bottom Gasket                |           |               | 9.25       | 9.25     |
| 1           | HS200660    | Trigger Indexer              |           |               | 20.00      | 20.00    |
| 1           | HS-200319   | Auto Indexer                 |           |               | 95.00      | 95.00    |
| 1           | HS-200087   | Density Amplifier Modul      |           |               | 95.00      | 95.00    |
|             |             | Humboldt 5001C Serial # 1270 |           |               |            |          |
|             |             | Sales Tax                    |           |               | 6.20%      | 0.00     |
|             |             |                              |           |               | Total      | \$469.25 |

## Instrotek, Inc.

UNITS: PCF

GAGE MODEL: H5001C

SER: 1270

CALIB DATE: 03/14/03

CALIB BAY: 1

SOURCE TYPE: GAMMA NEUTRON

STD COUNT:

DENSITY: 2549

SERIAL: 0 0

MOISTURE: 529

## \*\* DENSITY CALIBRATION DATA \*\*

| Depth | A        | B       | C        |
|-------|----------|---------|----------|
| BS    | 2.22254  | 0.01761 | -0.09041 |
| 2     | 6.36275  | 0.01205 | 0.20675  |
| 4     | 8.25913  | 0.01494 | 0.21728  |
| 6     | 9.97103  | 0.01912 | 0.09179  |
| 8     | 11.49266 | 0.02356 | 0.02438  |

## \*\* MOISTURE CALIBRATION DATA \*\*

| E       | F       |
|---------|---------|
| 0.05293 | 0.01724 |





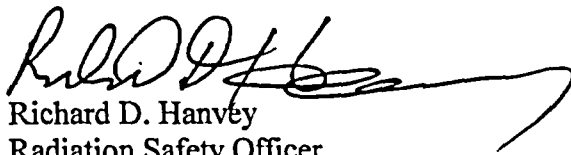


**To:** All Employees  
**From:** R.D. Hanvey, R.S.O.  
**Date:** July 1, 2004  
**Subject:** Assistant Radiation Safety Officer

C. Patel – Rahway, New Jersey, Mike Bottalico – Atlantic City, NJ, and John Branyan – Broomall, PA have been designated as assistant radiation safety officer and will assist the radiation safety officer ensuring the following.

- Company compliance with federal, state, DOT regulations and the company's radiations program.
- Stopping licensed activities that the RSO considers unsafe.
- Possession, use, storage, and maintenance of sources and gauges are consistent with the limitations in the license, the Sealed Source and Device Registration sheet(s), and manufacturer's recommendations and instructions.
- Individuals using gauges are properly trained.
- When necessary, personnel monitoring devices are used and exchanged at the proper intervals; records of the results of such monitoring are maintained.
- Gauges are properly secured.
- Proper authorities are notified in case of accident, damage to gauges, fire, or theft.
- Unusual occurrences involving the gauge (e.g., accident, damage) are investigated, cause(s) and appropriate corrective action are identified, and corrective action is taken.
- Audits are performed at least annually and documented, and corrective actions taken.
- Licensed material is transported in accordance with all applicable *DOT* requirements.
- Licensed material is disposed of properly.
- Appropriate records are maintained.
- Up-to-date license is maintained and amendment and renewal requests submitted in a timely manner.

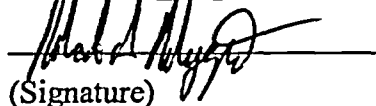
Sincerely,

  
Richard D. Hanvey  
Radiation Safety Officer  
CTO/slm

Note: All areas indicated in audit notes may not be applicable to every license and may not need to be addressed during each audit.

Licensee's name: U.S. ENGINEERING LABS License No.: 29-30107-01

Auditor: MARTIN H. MYERANT Date of Audit: 11-18-03 Telephone No.: 732 382 3553

  
(Signature)

## 1. AUDIT HISTORY

- a. Last audit of this location conducted on (date) \_\_\_\_\_.
- b. Were previous audits conducted yearly? [10 CFR 20.1101] ☒ (YES) ☐ (NO) ☐ (N/A)
- c. Were records of previous audits maintained? [10 CFR 20.21021] ☐ (YES) ☒ (NO) ☐ (N/A)
- d. Were any deficiencies identified during the last two audits or two years, whichever is longer? ☒ (YES) ☐ (NO) ☐ (N/A)
- e. Were corrective actions taken? (Look for repeated deficiencies). ☒ (YES) ☐ (NO) ☐ (N/A)

## 2. ORGANIZATION AND SCOPE OF PROGRAM

- a. If the mailing address or places of use changed, was the license amended? ☒ (YES) ☐ (NO) ☐ (N/A)
- b. If ownership changed or bankruptcy was filed, was prior NRC consent obtained or was NRC notified? ☐ (YES) ☐ (NO) ☒ (N/A)
- c. If the RSO was changed, was the license amended? Does the new RSO meet NRC training requirements? ☐ (YES) ☐ (NO) ☒ (N/A)
- d. If the designated contact person for NRC changed, was NRC notified? ☐ (YES) ☐ (NO) ☒ (N/A)
- e. Does the license authorize all of the NRC-regulated radionuclides contained in the gauges possessed? ☒ (YES) ☐ (NO) ☐ (N/A)
- f. Are the gauges as they are described in the Sealed Source and Device (SSD) Registration Certificate or Sheet? Are copies of (or access to) SSD Certificates available? Does the licensee have the manufacturers' manuals for operation and maintenance? [10 CFR 32.2101] ☒ (YES) ☐ (NO) ☐ (N/A)
- g. Are the actual uses of gauges consistent with the authorized uses listed on the license? ☒ (YES) ☐ (NO) ☐ (N/A)
- h. Is the RSO fulfilling his/her duties? ☒ (YES) ☐ (NO) ☐ (N/A)

## APPENDIX F

### 3. TRAINING AND INSTRUCTIONS TO WORKERS

- a. Were all workers who are likely to exceed 100 mrem/yr instructed per 10 CFR 19.12? Was refresher training provided, as needed? (YES) (NO) (N/A)
- b. Did each gauge operator attend an approved course before using the gauges? (YES) (NO) (N/A)
- c. Are training records maintained for each gauge operator? (YES) (NO) (N/A)
- d. Did interviews with operators reveal that they know the emergency procedures? (YES) (NO) (N/A)
- e. Did this audit include observation of operators using the gauge in a field situation? (YES) (NO) (N/A) Operating gauge? (YES) (NO) (N/A) Performing routine cleaning and lubrication? (YES) (NO) (N/A) Transporting gauge? (YES) (NO) (N/A) Storing gauge? (YES) (NO) (N/A)
- f. Did the operator demonstrate safe handling and security during transportation, use, and storage? (YES) (NO) (N/A)
- g. Was HAZMAT training (required at least once every three years) provided as required? [49 CFR 172.700, 49 CFR 172.701, CFR 172.702, 49 CFR 172.703, 49 CFR 172.704] (YES) (NO) (N/A)

### 4. RADIATION SURVEY INSTRUMENTS

- a. If the licensee possesses its own survey meter, does the survey meter meet NBC's criteria? (YES) (NO) (N/A)
- b. If the licensee does not possess a survey meter, are specific plans made to have one available? (YES) (NO) (N/A)
- c. Is the survey meter needed for non-routine maintenance calibrated as required? [10 CFR 20.1501] (YES) (NO) (N/A)
- d. Are calibration records maintained? [10 CFR 20.2103(a)] (YES) (NO) (N/A)

### 5. GAUGE INVENTORY

- a. Is a record kept showing the receipt of each gauge? [10 CFR 30.51(a)(1)] (YES) (NO) (N/A)
- b. Are all gauges received physically inventoried every 6 months? (YES) (NO) (N/A)
- c. Are records of inventory results with appropriate information maintained? (YES) (NO) (N/A)

### 6. PERSONNEL RADIATION PROTECTION

- a. Are ALARA considerations incorporated into the radiation protection program? [10 CFR 20.1101(b)] (YES) (NO) (N/A)
- b. Is documentation kept showing that unmonitored users receive less than 10 percent of limit? (YES) (NO) (N/A)
- c. Did unmonitored users' activities change during the year which could put them over 10 percent of limit? (YES) (NO) (N/A)
- d. If yes to c. above, was a new evaluation performed? (YES) (NO) (N/A)

e. Is external dosimetry required (user receiving greater than 10 percent of limit)? Is dosimetry provided to users? (YES) (NO) (N/A)

i. Is the dosimetry supplier NVLAP-approved? 110 CFR 20.1501(c) (YES) (NO) (N/A)

ii. Are the dosimeters exchanged monthly for film badges and at the industry-recommended frequency for TLDs? (YES) (NO) (N/A)

QUARTERLY

iii. Are dosimetry reports reviewed by the RSO when they are received? (YES) (NO) (N/A)

iv. Are the records NRC forms or equivalent? [10 CFR 20.2104(d), 10 CFR 20.2106(c)] • NRC-4 "Cumulative Occupational Exposure History" completed? (YES) (NO) (N/A) • NRC-5 "Occupational Exposure Record for a Monitoring Period" completed? (YES) (NO) (N/A)

v. If a worker declared her pregnancy, did licensee comply with, 10 CFR 20.1208? Were records kept of embryo/fetus dose per 10 CFR 20.2106(e)? (YES) (NO) (N/A)

f. Are records of exposures, surveys, monitoring, and evaluations maintained? [10 CFR 102, 10 CFR 20.2103, 10 CFR 20.2106] (YES) (NO) (N/A)

## 7. PUBLIC DOSE

- a. Are gauges stored in a manner to keep doses below 100 mrem in a year? ☒ (YES) (NO) (N/A) [10 CFR 1301(a)(1)]
- b. Has a survey or evaluation been performed per 10 CFR 20.1501(a)? Have there been any additions or changes to the storage, security, or use of surrounding areas that would necessitate a new survey or evaluation? ☒ (YES) (NO) (N/A)
- c. Do unrestricted area radiation levels exceed 2 mrem in anyone hour? ☒ (YES) (NO) (N/A) [10 CFR 0.1301(a)(2)]
- d. Are gauges being stored in a manner that would prevent unauthorized use or removal? ☒ (YES) (NO) (N/A) [10 CFR 20.1801]
- e. Are records maintained? ☒ (YES) (NO) (N/A) [10 CFR 20.2103, 10 CFR 20.21071]

## 8. OPERATING AND EMERGENCY PROCEDURES

- a. Have operating and emergency procedures been developed? ☒ (YES) (NO) (N/A)
- b. Do they contain the required elements? ☒ (YES) (NO) (N/A)
- c. Does each operator have a current copy of the operating and emergency procedures, including current telephone numbers? ☒ (YES) (NO) (N/A)

## 9. LEAK TESTS

- a. Was each sealed source leak tested every 6 months or at other prescribed intervals? ☒ (YES) (NO) (N/A)
- b. Was the leak test performed as described in correspondence with NRC and according to the license? ☒ (YES) (NO) (N/A)

c. Are records of results retained with the appropriate information included? ☒ (YES) ☐ (NO) ☐ (N/A)

d. Were any sources found leaking and if yes, was NRC notified? ☐ (YES) ☒ (NO) ☐ (N/A)

## 10. MAINTENANCE OF GAUGES

a. Are manufacturer's procedures followed for routine cleaning and lubrication of the gauge? ☒ (YES) ☐ (NO) ☐ (N/A)

b. Does the source or source rod remain attached to the gauge during cleaning? ☒ (YES) ☐ (NO) ☐ (N/A)

c. Is non-routine maintenance performed where the source or source rod is detached from the gauge? ☐ (YES) ☒ (NO) ☐ (N/A) If yes, was it performed according to license requirements (e.g., extent of work, individuals performing the work, procedures, dosimetry, survey instrument, compliance with 10 CFR 20.1301 limits)? ☐ (YES) ☒ (NO) ☐ (N/A)

## 11. TRANSPORTATION

a. Was DOT-7A or other authorized packages used? ☒ (YES) ☐ (NO) ☐ (N/A) [49 CFR 173.415, 49 CFR 173.416(b)]

b. Are package performance test records on file? ☒ (YES) ☐ (NO) ☐ (N/A)

c. Are special form sources documented? ☒ (YES) ☐ (NO) ☐ (N/A) [49 CFR 173.476(a)]

d. Did the package have 2 labels (ex. Yellow-II) with TI, Nuclide, Activity, and Hazard Class? ☒ (YES) ☐ (NO) ☐ (N/A) [49 CFR 172.403, 49 CFR 173.441]

REPLACED LABELS ON 5 GAUGES

e. Was the package properly marked? ☒ (YES) ☐ (NO) ☐ (N/A) [49 CFR 172.301, 49 CFR 172.304, 49 CFR 172.310, 49 CFR 172.324]

f. Was the package closed and sealed during transport? ☒ (YES) ☐ (NO) ☐ (N/A) [49 CFR 173.475(f)]

g. Were shipping papers prepared and used? (YES) (NO) (N/A) [49 CFR 172.200(a)]

h. Did the shipping papers contain proper entries (Shipping name, Hazard Class, Identification Number (UN Number), Total Quantity, Package Type, Nuclide, RQ, Radioactive Material, Physical and Chemical Form, Activity, category of label, TI, Shipper's Name, Certification and Signature, Emergency Response Phone Number, Cargo Aircraft Only [if applicable])? (YES) (NO) (N/A) [49 CFR 172.200, 49 CFR 72.201, 49 CFR 172.202, 49 CFR 172.203, 49 CFR 172.204, 49 CFR 172.604]

*SOME PACKAGES REQUIRED UPDATED INFO.*

i. Were the shipping papers within the driver's reach and readily accessible during transport? (YES) (NO) (N/A) [49 CFR 177.817(e)]

j. Was the package secured against movement? (YES) (NO) (N/A) [49 CFR 177.834]

k. Was the vehicle placarded, if needed? (YES) (NO) (N/A) [49 CFR 172.504]

l. 1. Were over packs, if needed, used properly? (YES) (NO) (N/A) [49 CFR 173.251]

m. k. Were any incidents reported to DOT? (YES) (NO) (N/A) [49 CFR 171.15, 161]

## 12. AUDITOR'S INDEPENDENT SURVEY MEASUREMENTS (IF MADE)



- n. a. Describe the type, location, and results of measurements. Do any radiation levels exceed regulatory limits? (YES) (NO) (N/A)

SOLVED STORAGE AREA + ADJACENT OFFICE

### 13. NOTIFICATION AND REPORTS

- a. Was any radioactive material lost or stolen? (YES) (NO) (N/A) Were reports made? (YES) (NO) (N/A) [10 CFR 20.2201, 10 CFR 30.50]
- b. Did any reportable incidents occur? (YES) (NO) (N/A) Were reports made? (YES) (NO) (N/A) [10 CFR 20.2202, 10 CFR 30.501]
- c. Did any overexposures and high radiation levels occur? (YES) (NO) (N/A) Were they reported? (YES) (NO) (N/A) [10 CFR 20.2203, 10 CFR 30.50]
- d. If any events (as described in items a through c above) did occur, what was the root cause? (YES) (NO) (N/A) Were the corrective actions appropriate? (YES) (NO) (N/A)
- e. Is the licensee aware of the telephone number for the NRC Emergency Operations Center? (YES) (NO) (N/A) [(301) 816-51001]

### 14. POSTING AND LABELING

- a. Is NRC-3 'Notice to Workers' posted? (YES) (NO) (N/A) [10 CFR 19.11]
- b. Are NRC regulations and license documents posted or are a notice posted stating where these documents are located? (YES) (NO) (N/A) [10 CFR 19.11, 10 CFR 21.6]
- c. Is there any other posting and labeling? (YES) (NO) (N/A) [10 CFR 20.1902, 10 CFR 20.1904]

### 15. RECORDKEEPING FOR DECOMMISSIONING

- a. Are records kept of information important to decommissioning? (YES) (NO) (N/A) [10 CFR

30.35(8)]

- b. Do records include all information outlined? (YES) (NO) (N/A) [10 CFR 30.35(8)]

#### 16. BULLETINS AND INFORMATION NOTICES

- a. Are NRC bulletins, NRC Information Notices, and NMSS Newsletters, received? (YES) (NO) (N/A)

- b. Is appropriate training and action taken in response? (YES) (NO) (N/A)

#### 17. SPECIAL LICENSE CONDITIONS OR ISSUES

- a. Did the auditor review special license conditions or other issues (e.g., non-routine maintenance)? (YES) (NO) (N/A)

#### 18. DEFICIENCIES IDENTIFIED IN AUDIT; CORRECTIVE ACTIONS

- a. Summarize problems and/or deficiencies identified during the audit.  
(REMARKS)

PACKAGE LABELING AND TRANSPORT  
INFO MISSING

APPENDIX F

- b. If problems and/or deficiencies were identified in this audit, describe the corrective actions planned or taken. Are corrective actions planned or taken at ALL licensed locations (not just location audited)? (YES) (NO) (N/A)

- c. Provide any other recommendations for improvement. OPERATORS DIRECTED TO VERIFY LABELING AND DOCUMENTATION  
(REMARKS) PRIOR TO GAUGE SIGN OUT  
REMINI OPERATORS @ QTRLY MEETINGS

19. EVALUATION OF OTHER FACTORS

- a. Is senior licensee management appropriately involved with the radiation protection program and/or RSO oversight? (YES) (NO) (N/A)

- b. Does RSO have sufficient time to perform his/her radiation safety duties? (YES) (NO) (N/A)

- c. Does licensee have sufficient staff to support the radiation protection program? (YES) (NO) (N/A)

AS STAFF AND GAUGE INVENTORY INCREASE  
SO WILL NEED FOR RSO ASSISTANCE

*Madhup* 11-12-03

TO RADIATION & SAFETY OFFICER

SEPTEMBER 22, 2004 AT ABOUT 2PM, AFTER I HAVE FINISHED PERFORMING 2<sup>ND</sup> LIFT DENSITY TEST OF PARKING DRIVE AREA, HOME DEPOT @ CRANBURY, AND WAITING FOR THE PROCEEDING LIFT, I WAS SITTING IN MY TRUCK RECORDING THE TEST RESULTS IN MY REPORT SHEET, MY DENSITY GAUGE #33316 WAS PLACED INSIDE THE ISLAND BETWEEN FIRE HYDRANT AND LIGHT POLE UNDER MY SURVEILLANCE APPROXIMATELY 90 FEET AND APPROACHED BY 2 NRC INSPECTORS.

THE GAUGE WAS UNDER MY CONSTANT SURVEILLANCE AND IT WAS NOT IN DANGER BEING DAMAGED BY CONSTRUCTION EQUIPMENT.

*Gizaw Makuria*  
GIZAW MAKURIA  
OCTOBER 28, 2004



U.S. Engineering Laboratories, Inc.

MEMBER  
ACIL

9/24/04

TO WHOM IT MAY CONCERN

I HARSHAD.C PATEL EMPLOYEE OF  
U.S. LABS WORKING AT 71 STATION RD IN CRANBURY N.J, WAS  
QUESTIONED BY N.R.C AND ASKED WHERE I KEEP THE  
GAUGE I USUALLY KEEP THE GAUGE LOCKED IN THE ~~TRUNK OF~~  
TRUNK OF MY VEHICLE. BUT WHEN APPROACHED BY N.R.C  
I WAS NERVOUS AND TOLD THEM I KEEP IT IN THE CLOSET  
OF MY APARTMENT WHICH WAS A FALSE STATEMENT.

Harshad.C. Patel

TO RADIATION & SAFETY OFFICE

IN ADDITION TO THE MEMORANDUM I SUBMITTED  
OCTOBER 28, 2004 I HAVE THE FOLLOWING: —

WHENEVER I AM OBLIGED TO TAKE THE GAUGE  
HOME I PUT IT IN A LOCKED BOX AND PLACE IT  
IN 2<sup>ND</sup> FLOOR BALCONY WHERE NO ONE COULD  
REACH, IN FACT, SINCE THERE ARE  
PARKING GARAGES BELOW THE FIRST FLOOR,  
MY APARTMENT BALCONY WOULD BE 3<sup>RD</sup> FLOOR  
FROM THE GROUND AND THERE IS NO ACCESS  
TO THE BALCONY FROM OUTSIDE.

PICTURES OF FRONT AND BACK VIEWS OF  
MY APARTMENT COULD BE SUBMITTED IF  
REQUESTED.

*Gizaw Makuria*  
GIZAW MAKURIA  
OCTOBER 29, 2004

**Martin Mygrant**

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**From:** 6098681229@tmomail.net

**Sent:** Thursday, October 28, 2004 9:24 AM

**To:** Martin Mygrant

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**Martin Mygrant**

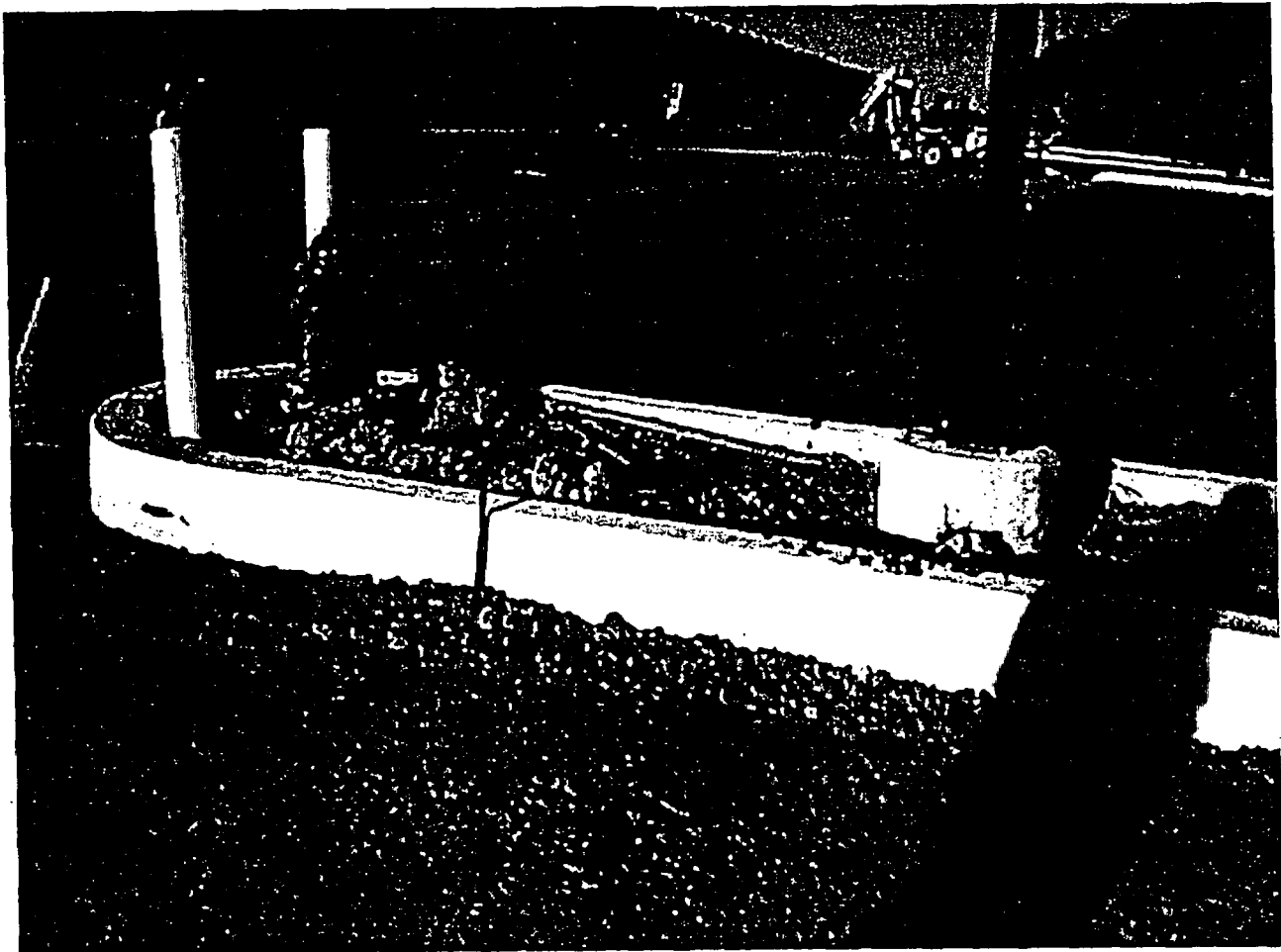
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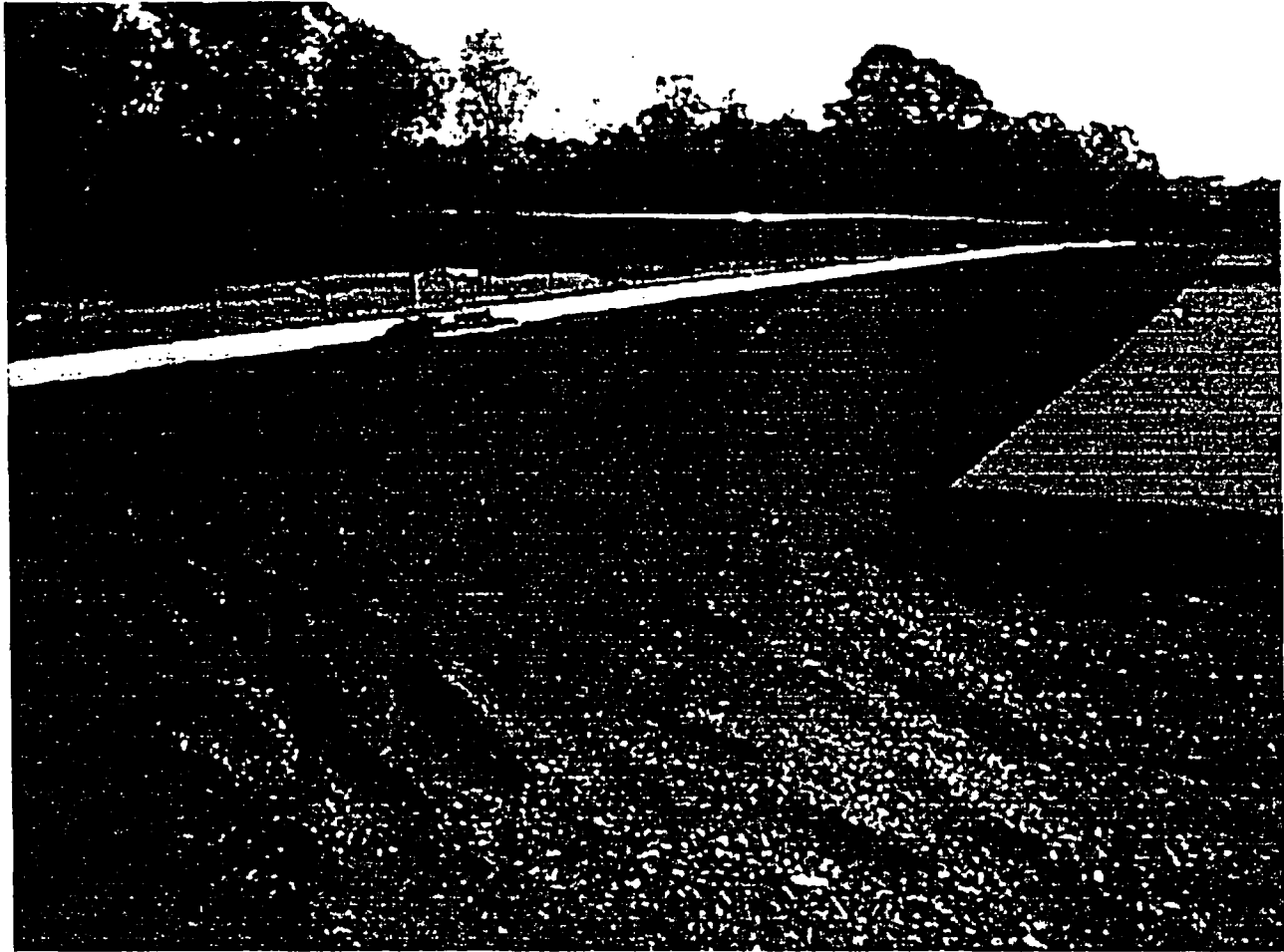
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