

**Attachment 1
LBNL ORPS and PAAA Occurrences
April 1, 2003 to March 30, 2004**

| ORPS and PAAA Events | Where/when did it happen? Date, facility, facility function, systems components keywords | Who was involved? Facility, Site, PSO, Contractor, work group keyword | What happened? Reporting criteria, significance category, additional detail keywords |
|--|--|--|--|
| Unauthorized BEARS work and resulting excessive exposure PAAA 2003-04 | 1. 4/1/2003 2. Building 88 3. Biomedical lab 4. Maintenance and repair of biomedical equipment | 1. Building 88 2. LBNL 3. Life Sciences Division 4. Biomedical lab | 1. Unplanned exposure 2. Non-ORPS reportable 3. Exposure beyond scope of radiation authorization |
| Unauthorized Entry at B75C LBL-EHS-2003-0001 | 1. 5/15/2003 2. Building B75C 3. Sealed sources / calibration facility 4. Sealed sources | 1. Building B75C 2. LBNL 3. EHS Division 4. Fire dept. inspector | 1. Near miss (10b) 2. Off-normal / > Cat 4 3. Unauthorized entry into a controlled rad area |
| Penetration of Underground 110V Line Near B64 LBL-OPS-2003-0001 | 1. 8/1/2003 2. Grounds near B64 3. Excavation 4. Underground utility line | 1. Outside of B64 2. LBNL 3. Facilities Division 4. Subcontractor construction crew | 1. Near miss (10b) 2. Off-normal / Cat 3 3. Contact with a hazardous energy source |
| Transport of Sealed Sources to LBNL LBL-EED-2003-0001 | 1. 8/13/2003 2. UCB/LBNL 3. Transport from UCB to LBNL 4. Use of private vehicle to transport two sealed sources. | 1. Davis Hall and B70 2. UCB and LBNL 3. Environ Energies Tech Division 4. Post doc | 1. Transportation (6) 2. Off-normal / > Cat 4 3. Transport of sealed sources in violation of DOT regulations |

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| Pa-231 Contamination at B85 LBL-EHS-2003-0002 | 1. 8/15/2003 2. HWHF (B85) 3. Hazardous waste handling 4. Waste handling, characterization, packaging, ready for shipment | 1. HWHF (B85) 2. LBNL 3. EHS Division 4. Waste Management Group | 1. Spread of contamination (1d) 2. Off-normal / Cat 3 3. Procedures not followed / lack of mgmt oversight |
| Unauthorized removal of beamline shielding PAAA 2003-10 | 1. 8/26/2003 2. Building 6 3. Advanced Light Source 4. Removal of LN hose from hutch roof | 1. Building 6 2. LBNL 3. Advanced Light Source Division 4. Construction/maintenance subcontractor | 1. Management concern 2. Non-ORPS reportable 3. Subcontractor improperly covered hutch opening from removed LN hose with rag |
| Contaminated objects found in B71-128 PAAA 2003-08 | 1. 8/26/2003 2. Building 71 3. Research lab 4. Legacy material in posted area | 1. Building 71 2. LBNL 3. EHS Division 4. Radiation Protection Group | 1. Legacy material 2. Non-ORPS reportable 3. Planned survey in controlled area to locate legacy material |
| RPG filefolder containing contaminated material sample PAAA 2003-09 | 1. 8/28/2003 2. Building 75B 3. Offices 4. Material sample filed in office records | 1. Building 75 2. LBNL 3. EHS Division 4. Radiation Protection Group | 1. Loss of control 2. Non-ORPS reportable 3. Sample contaminated material filed in incident report files |

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|---|---|--|---|
| Contaminated hood outside B71 PAAA 2003-11 | 1. 10/20/2003 2. Outside of B71 3. Research labs 4. Old fume hood | 1. Building 71 2. LBNL 3. EHS Division 4. Radiation Protection Group | 1. Legacy material 2. Non-ORPS reportable 3. Old fume hood found outside B71 with contamination |
| Violation of LOTO procedures at B74 LBL-OPS-2004-0001 | 1. 1/13/2004 2. Building 74 3. Research labs 4. Electrical power distribution | 1. Building 74 2. LBNL 3. Facilities Division 4. Subcontractors | 1. Hazardous energy control (Group 2C.2) 2. Significance Category 3 3. Failure to follow LOTO procedures |
| Air sample exceeded PEL for lead at 51B demolition LBL-OPS-2004-0002 | 1. 2/25/2004 2. Building 51B 3. External Proton Beam Hall 4. Demolition project | | 1. Personnel exposure above PEL (Group 2A.5) 2. Significance Category 3 3. Air monitoring results above the PEL |
| Regulatory Notice of Violation at B85 LBL-EHS-2004-0001 | 1. 3/17/2004 2. Building 85 3. Hazardous Waste Handling Facility 4. Waste management | 1. Building 85 2. LBNL 3. EH&S Division 4. Waste Management Group | 1. Noncompliance notification (Group 9.2) 2. Significance Category 4 3. DTSC inspection |

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How did it happen?

Cause code, human performance code
couplet, ISM function, additional detail
keywords

1. [A4B3C08] Job scoping did not identify special circumstances and/or conditions

2. NA

3. Scope of work LTA

4. Maintenance and repair work beyond scope of radiation use authorization

1. [A3B2C01] Strong rule incorrectly chosen over other rules

2. [A4B4C11] Assignment did not consider worker's ingrained work patterns

3. Developed/implemented controls LTA

4. Ignored caution sign and entered controlled area

1. [A3B1C01] Check of work LTA

2. [A1B3C01] Design/documentation LTA

3. Analyzed hazards LTA

4. Excavation did not anticipate unusual location of utility line

1. [A3B3C01] Attention was given to wrong issues

2. [A4B1C03] Management direction created insufficient awareness of impact of actions on safety/reliability

3. Performed work within controls LTA

4. Used private vehicle to transport two sealed sources in violation of DOT regulations

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How did it happen?

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1. [A3B4C01] Individual's capability to perform work LTA
2. [A4B1C04] Management follow-up or monitoring of activities did not identify problems
3. Performed work within controls LTA
4. Personnel did not follow authorized work procedures or ALARA practices.
Management did not assure that control procedures were being used consistently

1. [A4B4C01] Tasks and individual accountability not made clear to worker
2. NA
3. Feedback/improvement LTA
4. Covering hole with rags not in scope of work and not adequate to protect against beamline radiation

1. [A7B2C01] Legacy contamination
2. NA
3. NA
4. Planned survey for legacy material

1. [A4B1C01] Management policy guidance/expectations not well-defined, understood, or enforced
2. NA
3. Developed/implemented controls LTA
4. Health physicist inappropriately placed sample material in files

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1. [A7B2C01] Legacy contamination
2. NA
3. Developed/implemented controls LTA
4. Contaminated fume hood found outside of
building/controlled area

1. [A3B1C03] Incorrect performance due to
mental lapse
2. [A4B5C13] Accuracy / effectiveness of
change not verified or not validated.
3. Perform work with controls LTA
4. Subcontractor did not completely follow
their LOTO procedures

1. [A1B2C07] Error in equipment or material
selection
2. NA
3. Develop and implement controls LTA
4. Air sample result required increase in
respiratory protection factor.

NA (causes not determined for Category 4
events)