

# Environmental Compliance Auditing At UBC

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Manager Environmental Programs



# Outline

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- UBC Background
- How We Established The Program
- What We Do
- How Effective It Is At Managing Our Risks
- What Did We Learn



# UBC Background

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- 35000 students, 1800 faculty, 12000 staff
- Point Grey Campus 402 hectares
  - Maple Ridge Research Forest 5000 ha
  - Oyster River Research Farm 608 ha
  - Alex Fraser Research Forest 6400 ha
- ~ 500 buildings
- ~ 4700 tonnes waste annually

- 600 Teaching & research labs
- Mechanical & electrical shops
- Garage & service stations
- 2 Farms
- 2 Commercial logging op's
- Rural locations
- Powerhouse
- Special waste facility
- Print shops
- Electrical substations
- Food service & commercial outlets
- Landscaping
- Clinical facilities
- Residences
- Marine stations

# How We Established The Program

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- Prioritized areas in terms of risk
  - 17% high, 12% med., 7% low, 64% v. low
- Quote from consultants
- Developed Proposal
  - 1 audit officer, 2 audit assistants, 2 interns
  - Partial funding from government grants
- Targets
  - All high, medium & low, 31% v. low



# What We Do

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- Environmental audit means a *systematic, objective method of identifying and verifying that laws, regulations, procedures and University guidelines for environmental, health, occupational hygiene, safety and emergency preparedness standards are being followed. The examination involves analysis, testing and confirmation of procedures and practices.*



# Audit Process

- Contact dept. head - info request
- Pre-audit research (refer to handout)
- Administrative interview
- Tour of facilities
- Interviews with supervisors, mgrs.
- Personnel interviews
- Report preparation
- Closing meeting
- Action plan & follow up



# Information Request

- Safety program manual
- Safety inspection reports
- Accident investigation reports
- Building emergency plans
- Safety committee minutes
- Environmental permits, licenses,
- Risk or environmental impact assessments
- Correspondence relating to any complaints, regulatory actions
- Exposure control plan for bloodborne pathogens
- Handling & disposal procedures for hazardous materials
- Vehicle maintenance records
- Contents of the departmental orientation
- Training records
- List of people in the department who use pesticides, and their certification dates
- List of people likely to use picric or perchloric acid
- List of people working with genetically modified organisms or non-indigenous species
- Any other written procedures or policies (e.g. TDG, pesticide management etc.)



# Administrative Interview

- Objective
  - admin systems, id. areas to investigate
- Customize Audit
- Sections covered
  - Specific activities
  - Materials mgmt & disposal
  - TDG
  - Safety program
  - Training
  - Emergency preparedness
  - Admin responsibilities
  - Physical site conditions

**6.0 Transportation of Dangerous Goods (Con't)**2 BC-TDG  
C-TDG  
BC-WMA**Shipping:**

What types of dangerous goods does the department ship?

- |                    |                       |                          |                          |                          |
|--------------------|-----------------------|--------------------------|--------------------------|--------------------------|
| 1. Biohazards      | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Chemicals       | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Radioisotopes   | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Dry Ice         | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Paints/thinners | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Other: _____    | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

How are dangerous goods shipped?

- |  |                       |                          |                          |                          |
|--|-----------------------|--------------------------|--------------------------|--------------------------|
| On campus - Pickup by ESF                    | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| On-campus - Department Vehicle               | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Off-campus - Personal Vehicles               | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Off-campus - Pickup by Landlord (placarded?) | <input type="radio"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disposal Company Name: _____                 |                       |                          |                          |                          |
| Carrier Company Name: _____                  |                       |                          |                          |                          |

If the carrier is not on the preferred vendors list, how does the Department ensure the company has a good standing history with respect to Health, Safety & Environment? (Insurance, certification, references) ☐

Who is responsible for shipping dangerous goods? ☐

Where are shipping manifests retained and who is responsible for retaining them? ☐

<input type="checkbox"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>

**VC:** Review TDG certification dates and name of carrier company  
Review shipping manifests for past two years

# Report Preparation

- Subject to Freedom of Info & Prot. Of Privacy Act
  - Findings and recommendations reports
- Controlled document list, numbered
- Root causes
- Notable mentions
- Do not supply draft to auditee

**3.3** The unit administration should ensure that the effluent discharged into the sewer at the xxxx is compliant with GVRD Sewage discharge guidelines for BOD waste (biological oxygen demand) and suspended solid waste, by conducting sampling of the discharge. Contact the Environmental Programs Officer (822-9280) for further information on sampling criteria and sampling techniques. In addition, the unit administration should locate historical documents of correspondence with the GVRD in regards to the xxxx sewer discharge for due diligence purposes.

Finding: 4.2.13

Reference: BC-WCA-R; M-SUB-1

Consequence: 1

Scale: 2

Probability: 2

**Priority: 4**





# How Effective Is It At Managing Our Risks

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## VERY

- #1 Proactively id's risks & issues
- #2 Communicates risks & expectations
- #3 Establishes a framework for corrective action & follow up
- #4 Increases awareness & education

- 3 year targets
  - High 100%
  - Medium 100%
  - Low 97%
  - V. Low 29%
- Percentage of recommendations addressed after 6 months
  - 66%
  - As of Dec 31, 2000 had made 1600 recommendations



- Report back to University Board of Governors on performance & issues
- Comments from auditees very positive
- By gradually raising the bar in terms of the criteria we audit against we are also helping to meet our EMS goal of continuous improvement





# What Did We Learn

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- Selling the proposal
  - proposal review & endorsement
  - supported by recommendation from respected management consultant
  - external verification of performance
- 2/3's of legal compliance issues relate to H&S not environment



- Large part of success related to the approach & attitude of auditors
  - #1 auditors
  - #2 offering of advice / work with auditee
  - Audit tools
- Success really depends upon addressing the issues

- Need to plan for follow-up audits
- An audit is only as good as the Auditor. While questionnaires & audit procedures are very important the auditor HAS to be able to audit well



# Further Information

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UBC ENVIRONMENTAL PROGRAMS