

Laboratory of Archaeology (LOA)
UBC

Deposits to LOA, UBC Repository for Archaeology Consultants

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Section 1 Steps to Using LOA as Repository

Even if LOA is the usual repository for materials from a site, please follow the steps listed here as we can often provide more up to date information - if we know work is being done.

To Request LOA as repository for archaeological collections, including ancestral remains

- 1) Before naming LOA in a British Columbia HCA permit application or First Nation permit application, contractor should consult with all affected First Nations about their choices for repository.
- 2) If all First Nations affected agree that LOA should act as repository,
 - a) contact LOA in writing (by email) with the request
 - b) describe the amount and type of material expected including whether wet materials or human remains are anticipated.
 - i) If LOA is requested as repository for human remains by the First Nations, the archaeology contractor is to provide to LOA in writing:
 - (1) Protocols requested by the First Nations to cover how decisions related to the ancestral remains are to be made and
 - ii) Any protocols requested by the First Nations for the transfer to the repository and care of ancestral remains in LOA repository.
 - c) Also advise LOA if collecting materials for residue analysis is part of the permit.
 - 3) LOA may telephone the contractor to discuss details related to the request.
 - 4) If the request falls within a preexisting MOU between LOA and the First Nation, approval can be expedited.
 - a) For ancestral remains or if there are no preexisting agreements between LOA and the First Nations that covers the deposit, the request will be reviewed at the next monthly meeting of the LOA Committee. These meeting usually occur the third week of each month.
 - 5) LOA will confirm in writing (by email) if the request is approved or not, the repository fee, the materials expected, and any conditions applied to the deposit, such as the volume or quantity of soil samples. Repository fee
 - a) LOA will also confirm whether the transfer of human remains is covered by the approval.
 - 6) Contractor should provide LOA with all Permit numbers in writing as soon as permits are issued.
 - 7) If any conditions of the original approval change during the work, LOA should be notified immediately.
 - a) This is especially important if human remains were not expected but are encountered. Once the contractor has made arrangements with the First Nations about the human remains, LOA should be advised, whether or not LOA will be the repository for the ancestral remains from the project.

- 8) The deposit delivered to LOA should contain **all collected materials** noted in LOA's approval letter as well as any other material produced during the course of the archaeological investigation, including:
- Labelled artifacts
 - Artifacts collected as samples for residue analysis
 - Artifact catalogue in Excel format (and any handwritten catalogues).
 - LOA will load consultant's catalogue information into the LOA artifact database which links to the Reciprocal Research Network (RRN).
 - Field notes and raw data
 - Site maps, drawings, excavation maps and drawings
 - Photographs (CD of digital photos or negatives of film images) must be included. LOA will also archive printed photographs if they are part of the deposit.
 - Photograph records
 - Copy of all permits
 - Final report
- 9) Transfer of artifacts, samples and documentation to the repository should be set up with LOA at least one week in advance.
- a) LOA would like to receive all materials at the same time.
 - i) Exceptions to this are human remains or other materials designated as culturally sensitive, materials from wet sites or materials collected for residue analysis.
 - (1) Human remains and culturally sensitive remains may be transferred to LOA facilities at any time agreed between the First Nations and consulting firm provided that LOA is notified of the transfer in advance.
 - (2) Materials collected from wet sites or for residue analysis may be transferred to the LOA facilities at any time agreed between the First Nations and consulting firm provided that LOA is notified at least one week in advance.
 - b) Contractor will tell LOA the total number of boxes or other packages in the deposit when making deposit arrangements at least one week before the delivery. LOA will use this information to create the invoice for repository charges to be paid by the archaeology contractor to LOA.
- 10) Transfer of ancestral remains will occur at the time and in the manner specified by the First Nations and will follow the protocols established by them.
- 11) Once LOA has checked the deposit for completeness,
- a) LOA invoices the contractor for the repository fee based on the final count of boxes transferred.
 - b) LOA does not charge a repository fee for ancestral remains.
 - c) LOA advises the contractor, the permit grantors (B.C. Archaeology Branch and First Nations) and First Nations named in the permits that the deposit is complete.

Section II LOA Repository Charges

LOA introduced a repository fee on June 1, 2014. It is reviewed annually.

- The fee is a one-time cost and applies to all deposits to the repository covered by heritage permit (provincial or First Nation).
- The fee is calculated by LOA at the time of the deposit and is based on the repository fee in effect the year of the deposit and box counts provided by the consulting firm and checked by LOA.
- All materials are included in the fee calculation: artifacts; documentation; samples.
- Box size may be up to standard bankers box (10" x 12" x 15")
- Box may weigh up to 50 lb.
- LOA will invoice the archaeologist/firm holding the permit(s) after the deposit has been received and checked for completeness.

Section III Packing Materials into Boxes for Deposit at LOA

Materials being deposited with the LOA repository should be packed into boxes by material type.

- **If it is necessary to mix material types in boxes, put materials that can be frozen in one box and materials that cannot be frozen into another box.**

Materials which CAN be frozen	Materials which CANNOT be frozen
Textiles	Metals
Wood	Rubber
Leather and fur	Ceramics
Basketry	Shell
Painted objects with intact paint layers (no cracks or delamination)	Painted objects with delaminating paint or lacquer
Bone	Glass
Antler	Plastics
Stone	
Small amounts of metal on composite objects (metal must be wrapped prior to freezing)	

Procedures for packing deposits for LOA repository:

- 1) Artifacts assigned a catalogue number should be placed in individual polyethylene plastic bags that just fit the object. The bags should be clean and have no writing on them.
 - a) Metal objects are an exception and are placed in paper bags, preferably acid free bags.
 - b) Ancestral remains are wrapped according to protocols established by First Nations for the project.
- 2) Artifact numbers should be written on/applied to every artifact to which a number has been assigned.
 - a) If the artifact is very tiny it can be placed in a bag with an acid-free paper tag showing the artifact number.
 - b) LOA currently uses very small, computer printed, paper labels on artifacts. Refer to [Section V Labelling Artifacts](#) for the method used at LOA.

- 3) Boxes of artifacts will be frozen for two weeks at a constant temperature of -20C if freezing is appropriate for the material types in the box.
 - a) NOTE: Objects do not freeze when subjected to freezing temperatures; only the living insects possessing body water are frozen.
 - b) Boxes are entirely wrapped and sealed airtight in heavy clear plastic at LOA to prevent condensation during unfreezing from affecting materials.

- 4) Materials that cannot be frozen without damaging the objects (metal, ceramic, glass, shell, rubber, plastic) will be quarantined for three months at LOA.
 - a) Boxes containing any of these materials are placed in “quarantine” for at least three months.
 - b) Objects inside the box may be packaged in paper bags (metal objects) or in plastic bags (everything else).

- 5) Ancestral remains are not frozen or sealed in airtight packages for pest mitigation. Observation of the remains and packaging occurs before the remains are placed in cedar lined ancestral housing.

Section IV Data Fields for LOA's Artifact Database

LOA uploads artifact catalogues to the LOA Database using Excel spreadsheet(s) provided by the depositor.

Please follow LOA's guidelines for entering data into fields for materials that will be deposited at LOA. Refer to *Example Spreadsheet for Upload to LOA Database* for examples of how data are entered.

Answers to Frequently Asked Questions:

- The use of similar fields to those in LOA's database / spreadsheet is really important as those spreadsheets are the most accurate way to transfer consultant's data to the LOA database without errors.
- If LOA has to convert measurements or work extensively with spreadsheets before they can be added to the database, those costs will be passed on to the consulting archaeology company.
- All databases have their rules and LOA's does too. Here are a few additional notes on cataloguing into your spreadsheet:
 - Do not use abbreviations.
 - Do not improvise. Check with LOA if in doubt.
 - Create one record for each unique catalogue number.
 - A "lot" can be used for more than one object collected from a single provenience. Lots are often used for non-diagnostic objects (lithic shatter, broken glass with no markings, etc) or for unidentified / unidentifiable materials that are collected. Unidentified materials, especially, are useful for future research.
 - Type into a field using **initial caps** – e.g. Projectile Point *not* projectile point;
 - Use upper and lower case for Borden site numbers– e.g. DhRt.
 - Use full sentences with initial capitals and ending in a period for fields with text boxes. Use full sentences for all comments. Example: Recovered under hearth. And not "recovered under hearth" with no initial caps or punctuation.
 - Enter dates in all fields as month/day/year (*mm/dd/yyyy*).

- Measurements of objects are recorded in mm to the nearest two decimal points. Eg 10.23 and not 10.225.
- All measurement fields must have an entry. If no measurement is possible, enter “n” in the field to indicate this.
- Measurements are not recorded for “lots” – just weight. For lots, enter “n” in the measurement field.
- Quantity is always 1. If it is a “lot” bag under one number, the quantity is 1 lot. Enter the count of objects in the lot into the Recorder Comments field. Also enter “Y” in the field for Lot.
- Weight is recorded in grams to one decimal point, eg 10.2 not 10.23.
- Ecofacts and manuports should receive artifact numbers. The “common name” can be entered as “ecofact”.
- Bulk samples, for example systematically collected samples of matrix, etc are handled separately from artifacts both in labeling method and storage. This includes dating samples (carbon, dendrological samples); unmodified fauna and shell.

Artifact Description Fields in LOA Database

Borden Number (Site)

Enter the Borden grid site identification which should also be written on the object – e.g. DhRt-4.

Borden Catalogue #

Enter the number that appears after the Borden Number. For example, for DhRt-4:5009, enter 5009.

If the number on the artifact has a suffix – enter it in the Borden Catalogue # field with no space between the last number and the suffix. Suffixes are usually lower case letters of the alphabet. For example, for DhRt-4:5009a, enter 5009a.

Other Site Number(s)

Record any alternate site identification here such as field catalogue numbers. Example of other site number: SFPR.

Other Catalogue #

Enter the number that appears after the Other Site Number. For example, for SFPR 1234, enter 1234.

Site Name

Enter the site name, capitalizing each word eg. Glenrose Cannery; Beach Grove.

Flag Fields (LOA's "Radio Button" Fields)

LOA uses radio buttons in our database for rapidly entering flags related to an artifact. Unfortunately, these buttons cannot be populated from an Excel spreadsheet.

Therefore, we ask that consulting archaeologists populate the appropriate fields with "Y" to indicate yes, this object falls within this category.

Flag fields are:

- **Culturally Sensitive**
- **Object Missing**
- **Conservation Required**
- **Number not on Object**
- **Lot**

Culturally Sensitive: Enter Y if the object is from burial context or if community advisors indicate it is culturally sensitive.

Object Missing: Enter Y if during movement or analysis the object could not be found.

Conservation required: Enter Y if the object requires conservation, for example if it is broken in pieces. Write details of conservation required in the Recorder Comments text field located below the radio buttons.

Number not on object: Enter Y if the artifact number is not written on the object; write the full catalogue number clearly written on a piece of acid free paper inserted in the artifact bag. Use black archival ink or pencil. E.g. DhRt-4:2345

Lot: Enter Y if the artifact number is for a lot. Enter the quantity of pieces in the lot n the Recorders Comments field.

Help Required Text Field

Use this text field to add information about radio button flags. Use sentence form for comments.

This field is also used for any other internal notes related to the artifact – e.g. Not an artifact; remove.

Object Type

Refer to the applicable glossary for help (Appendix A). Object types are **Ceramic; Composite Object; Faunal; Floral; Glass; Lithic, Chipped; Lithic, Ground, Pecked; Lithic, Other; Metal; Plastic; Replica; Rubber; Textile; Unknown; Assorted Material.**

Common Name

Refer to the applicable glossary (Appendix A) for some common names. Capitalize each word e.g. Anvil Stone; Chopper; Spall Flake; Projectile Point.

If the object common name could be one of two choices, enter both with “/” between the capitalized names e.g. Abrader/Whetstone; Adze Blade/Celt; Bead/Pendant; Bowl/Mortar.

If object is a preform for a common object, enter the common name first, followed by the word “Preform” e.g. Bead Preform.

Excavator Designation

Enter what the original excavator, analyst or project called the object. E.g. PRB

Material Type

- Enter the material type. For example Basalt; Basalt, Vitreous; Lignite; Quartz Crystal.
- For composite objects, enter all materials.

Quantity

The quantity is always 1.

Lot

For a “lot”,

- Enter 1 in the quantity field.
- Enter Y in the Lot field.
- Write the count for number of pieces in the *Recorder Comments* text field E.g. “Lot count is 34.”

Manufacturing Technique

Enter all appropriate manufacturing techniques. Refer to the appropriate glossary (Appendix A) for definitions of some terms.

e.g Braided; Cut; Drilled; Dyed; Forged; Ground/Abraded; Handwrought; Heat Treated; Inlaid; Machinewrought; Molded; Painted; Pecked; Polished; Sawed; Soldered; Stamped; Twisted; Unworked; Woven.

Formal Description

Enter all appropriate descriptive terms separated by a comma e.g. Blue, Ovoid Refer to the appropriate glossary (Appendix A) for definitions of some terms.

e.g. Burnished; Burnt; Decorated; Embossed; Excised; Grooved; Incised; Maker’s Mark; Oxidized; Painted; Patinated; Polished; Perforated; Sherd, Body; Sherd, Rim; Sherd, Unknown; Threaded.

Box Number

Enter the number of the box in which the object will be stored for transfer to the LOA repository.

- Preface the number with your company or project name e.g. Stantec 001.

Measurement and Weight Fields

- ***For Composite and Compound Objects*** - If an artifact contains several individually catalogued pieces, or is in pieces that belong together and share the same catalogue number, the parts should be weighed together (e.g., bead necklace, broken projectile point, a lot of lithic debitage, a lot of faunal samples, etc).

Measurements

- Measurements are required for each artifact catalogued individually.
- Multiple artifacts that share the same catalogue number and recorded as a “lot” are not measured. Weight must be recorded for a “lot”.
- Dimensions are recorded in millimeters to the nearest two digits (e.g., 22.23; 1.01).
- All measurement fields must have an entry.
 - If no measurement is possible, enter “n” in the field to indicate this.
 - Refer to Appendix B: Measuring guidelines for illustrations on measuring types of objects.

Weight

Record the weight of the artifact in grams to one place past the decimal point (e.g., 10.2).

Recorder Comments Field: Notes Viewed by the Public

Record any additional information that should be viewed by anyone searching this record using the RRN (rrncommunity.org) provided it does not have another field location in the database.

- Problems that must be resolved in the field lab or repository should not be entered here. Use the Help Required comments field for problems.
- All entries in this field must be written in sentence format.

Provenience Fields

Excavation Unit - Field may be completed with alpha or numeric data.

Sub Unit - Field may be completed with alpha or numeric data.

Trench - Field may be completed with alpha or numeric data.

Coordinates N-S - Field may be completed with alpha or numeric data.

Coordinates E-W - Field may be completed with alpha or numeric data.

Test Pit - Field may be completed with alpha or numeric data.

Feature - Field may be completed with alpha or numeric data.

Depth - Enter depth and unit of measure in the field, for example: 10.5 cm; 1.64 m.

Depth Datum Reference - Enter Select DBD (depth below datum) or ASL (above sea level) from the drop down menu or write in the applicable datum information, for example DBS (depth below surface).

Layer - Field may be completed with alpha or numeric data.

Level - Field may be completed with alpha or numeric data.

Provenience Comments (Additional Provenience Information)

Write in any additional information about provenience for which there is no other field. For example, if provenience is recorded as both DBD and DBS or ASL, enter the DBS or ASL information as a note in this text box.

Acquisition Information

Excavator - Write the name of the person or company.

Permit Number - Enter the permit number, for example HCA 2012-0056.

Year Excavated - Enter the year excavated as yyyy.

Project Name - Enter the name of the project.

Section V **Labelling Artifacts**

- LOA now uses a paper labelling system for artifact identification.
- There are some cases in which a label will not be directly applied to the artifact, including very small objects (like beads) and metal objects.
 - Objects too small to label will have the printed paper label placed inside the storage bag.
 - Metal objects will have the artifact number written on the paper storage bag as well as a paper label placed in the bag.

Supplies For Labelling Kits:

- **Golden Soft Gel** (brand) in both Matte and Glossy finish
- Brushes
- Pigma Micron (brand) archival ink pens in 02, 03, and 05 widths
- Acid-free paper
- Scissors
- Tweezers
- Bamboo skewers
- Cotton swabs
- Nail polish remover (acetone)
- Paper towels
- Container for water

Making Labels:

Computer Printed Labels

When possible, all new labels should be computer-printed.

- Use Tahoma bold font in 6 point size for all labels except very small objects; those may require 4 pt.
- Create labels in Excel and print, preferably with a laser printer although inkjet will work as well.
- Use only acid-free paper in the printer.
- Cut each label from the sheet as it is needed in order to prevent mix-ups or loss.

- The amount of white space around the label should be minimal so trim as close to the printed letters/numbers as possible.

Hand-Written Labels

If just one label is needed, a hand-written label is acceptable.

- Use the acid-free paper and Pigma Micron archival ink pens (02 width is preferable) found in the labelling kits.
- When hand printing numbers, consider legibility and print numerals in the way displayed below to prevent mix-ups between numerals.
 - In particular, the 4 should be open at the top, so it is not confused with a 9.
 - 5 should have a distinct flat top so it is not confused with a 6.
 - 7 should have the hash mark through the middle so it is not confused with 1.
 - 1 should have no hash marks at the top or bottom so it is not confused with a 7 or an upper case I.

1 2 3 4 5 6 7 8 9 0

- Letters that require particular attention are capitalized 'I' and 'G' and lower case 'b.'
 - Write 'I' with the hash marks on the top and bottom to differentiate from numeral '1' and the lower case 'l.'
 - 'G' and 'b' can look like '6', so be sure to give 'G' a tail and put a

slight slant on the bubble of the 'b.' I G b

Applying Labels:

Cleaning Artifacts (if necessary)

Most artifacts will already be cleaned, but if artifact still has matrix attached, please clean before applying the label unless it is for residue analysis.

- For lithic objects, gently clean with water and a soft brush and then thoroughly dry with paper towel.
- Bone and organic materials should NOT be cleaned with water; instead brush off loose dirt with soft brush.

Removal of Old Labels (if necessary)

Labels were previously applied by hand directly to the artifact using nib pens and india ink with nail polish layers applied both under and over the ink layer. Some dark artifacts also had a layer of gesso (white) applied before the label was written on the artifact.

Old style labels can be removed in a well-ventilated area using nail polish remover, bamboo sticks and cotton balls.

Applying Paper Label

- Use Golden Soft Gel as adhesive for the paper label.
- Select either the glossy or matte finish depending on the surface of the artifact.
 - Matte finish is appropriate for most objects, while glossy looks best on very shiny surfaces such as obsidian.
 - Fill a small container with water to rinse the brush between label applications.
 - After each rinse, dry the brush with paper towel before applying adhesive.
 - Keep lid on the adhesive as much as possible to prevent drying out.
 - Also be sure to protect the work surface with either paper or cardboard.
 - Adhesive can be cleaned using soap and water.

To apply labels:

- 1) Determine an appropriate location for the label on the object. The label should not obscure any evidence of modification, use-wear patterns, or any other significant features and should be placed on an area that is level.
- 2) Brush a band of adhesive onto this location. Adhesive patch should not be much larger than the size of the paper label
- 3) Using tweezers, place the paper label on the adhesive patch and ensure the label is lying flat, with no air bubbles
- 4) Cover label with a second layer of adhesive, ensuring that all edges have been coated with adhesive and that no portion of the label is coming away from the object.

To dry labels:

- 1) Once label has been affixed, leave object out of its plastic bag until dry to the touch.
- 2) At the end of each labeling session, wash brushes thoroughly with soap and water and secure lids on the jars containing adhesive.

Section VI Numbering Systems in LOA

LOA artifact numbering standards are followed for:

- database records
- photographs created by LOA
- artifact labels

Artifact Number Standards (LOA)

- Every **artifact** has a unique catalogue number.
- A “**lot**” of collected material from a the same provenience location is given a single artifact number.
 - Lots are used for non-diagnostic or unidentifiable materials such as lithic debitage, glass fragments, metal fragments, etc.
 - If an object is removed from a lot for research, it will need a unique number. In that case, the original lot artifact number should be provided in the Recorder Comments field of the artifact record in the LOA database.
- The catalogue number is made up of two parts separated by a colon (:).
 - **before the colon** is the information about the country, site, or survey location.
 - **after the colon** is only the unique artifact number.
 - There should be only one colon per artifact!
 - There are **no spaces** between the parts of the artifact number.
 - Note the use of a **dash** to separate parts of the country and site information before the colon in the Borden system site identifier

Numbering System	LOA Standard Entered in database, Written on object,
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	Written in print catalogue, As label on artifact photograph.
Borden system – sites in BC	DhRt-5:123
Borden system - unnumbered sites in BC or outside site boundary	DhRt-x:123

Before the Colon: Site Designation

Specific BC sites If the artifact is from a provincial *recorded site* in BC, the site number is the Borden designation plus a sequential number assigned by the province.
DhRs-1:
DhRt-2:

General Area in BC Collections – “X” Sites

If the artifact is NOT from a registered site in BC but can be narrowed down to a grid square of the Borden system, LOA gives the artifact an "x" as the site number. This can apply to artifacts collected just outside the boundary of a designated site.

DgRs-x:
DhRt-x:

RBCM, designated repository for the province, uses a “y” for this purpose.

After the Colon: Artifact Numbers

Artifacts are numbered sequentially in the order in which they are catalogued.

Blocks of artifact numbers for designated sites in BC are **assigned by the registrar of the Archaeology Branch at the RBCM** (Royal British Columbia Museum) in Victoria.

Always contact the manager of the repository being used for the collection who will contact the registrar to assign new numbers.

The registrar is Grant Keddie gkeddie@royalbcmuseum.bc.ca 250-387-2416. The Collections Manager is Genevieve Hill.

Non-Artifacts

Objects that were not modified by humans are non-artifacts. When catalogued, they should be given the designation "n" after the site number and before the colon. Non-artifacts include:

Mineral specimens

Unmodified stones [but not boiling stones],

DgRr-1n: (non-artifact from a specific site)

DgRr-n: (non-artifact from somewhere within the DgRr Borden grid)