

National Historic Preservation Act (NHPA) Item Salvage



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National Historic Preservation Act

Selection and Preservation

- This activity consists of identifying, selecting, cataloguing, photographing, and potentially preserving items held for NHPA evaluation from the Portsmouth Gaseous Diffusion Plant (PORTS) Cold War-era operational period.
- Items of specific interest are items unique to PORTS that are associated with the high enrichment of uranium by the gaseous diffusion process.
- PORTS personnel ensure that items identified during salvage activities at PORTS are similar to the salvage operations conducted at the Oak Ridge Reservation (TN).

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Screening Strategy (Selection Criteria)

The screening strategy employed during selection activities is based upon criteria established by the National Registry of Historic Places.

All items identified are to meet the following criteria:

1. Historically significant figures - Items in this category include objects used, owned, invented, made by, or represent personal effects, ephemera or memorabilia belonging to important people connected with PORTS or the Cold War era.
2. Historically important events - This category requires that an object be associated with an event that is historically significant to PORTS and/or the Cold War era; national and international Cold War events are reported in this category.

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Selection Criteria (Continued)

3. Significant advances in technology - Items in this grouping represent contributions to science and technology from PORTS. Topics such as levels of enrichment, environmental management and the nuclear age will be placed in this category.
4. Social history impact - This classification will be used for items that are representative of atomic social history at PORTS and the impact of atomic culture on the general public during the Cold War era. Examples of these subjects include worker safety, site security, local community, unions, public relations, clothing and morale.
5. Archival material - These materials may include maps, films, manuals, video, etc. Copies of necessary and appropriate documents will be included with the items. During the inventory process, the NHPA Site Lead will give priority to items designed, produced or modified at PORTS.

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Selection of Salvaged Items

- Item selection is a collaborative effort, and accomplished by the NHPA Site Lead; Facility Owners and Facility Custodians, Facility Subject Matter Experts, and a Photographer. Former employees with process and/or facility knowledge are also interviewed for historical knowledge. Retired personnel have been used to supplement lack of early process and facility knowledge by current personnel.
- If representative items unique and/or significant to the PORTS operations are identified, an NHPA “green-tag” is placed on the items and the items are immediately photographed. Real-time videos are also taken to capture ongoing work activities and facility operations. The items are housed in the XT-847 and X-720B Facilities pending NHPA evaluation.
- The NHPA Site Lead records a description of the items in a computer-based inventory. This inventory maintains all photographed items, the item/s is located (building name, floor number, column numbers, etc.) within the PORTS site.

Salvaged Items



Nuclear Radiation Carrier



The nuclear radiation carrier is currently located in the X-101 Health Services Center; used to transport severely contaminated employees to off-site medical facility.

Mortuary Table



The mortuary table is located in the X-101 Health Services Center; used to wash and/or decontaminate employees contaminated while performing work activities.

X-101 Health Services Center Medical Staff



This vintage photograph, located in a display case in the lobby of the X-101 Facility, illustrates the medical staff who provided medical attention to PORTS on-site personnel.

PORTS Security Forces

The PORTS Security Forces provided continuous security oversight, and implemented safety measures to ensure the PORTS facility was most protected. The trophies (forefront) are evidence that the PORTS Security Forces were most successful in Security Force competitions.



Additional trophies accumulated by the Security Forces are housed in trophy cases in the X-104 Guard Headquarters.



PORTS Security Forces



The PORTS Security Forces provided continuous security oversight, and implemented safety measures to ensure the PORTS facility was most protected. This vintage photograph shows some of the first women security guards employed at PORTS.

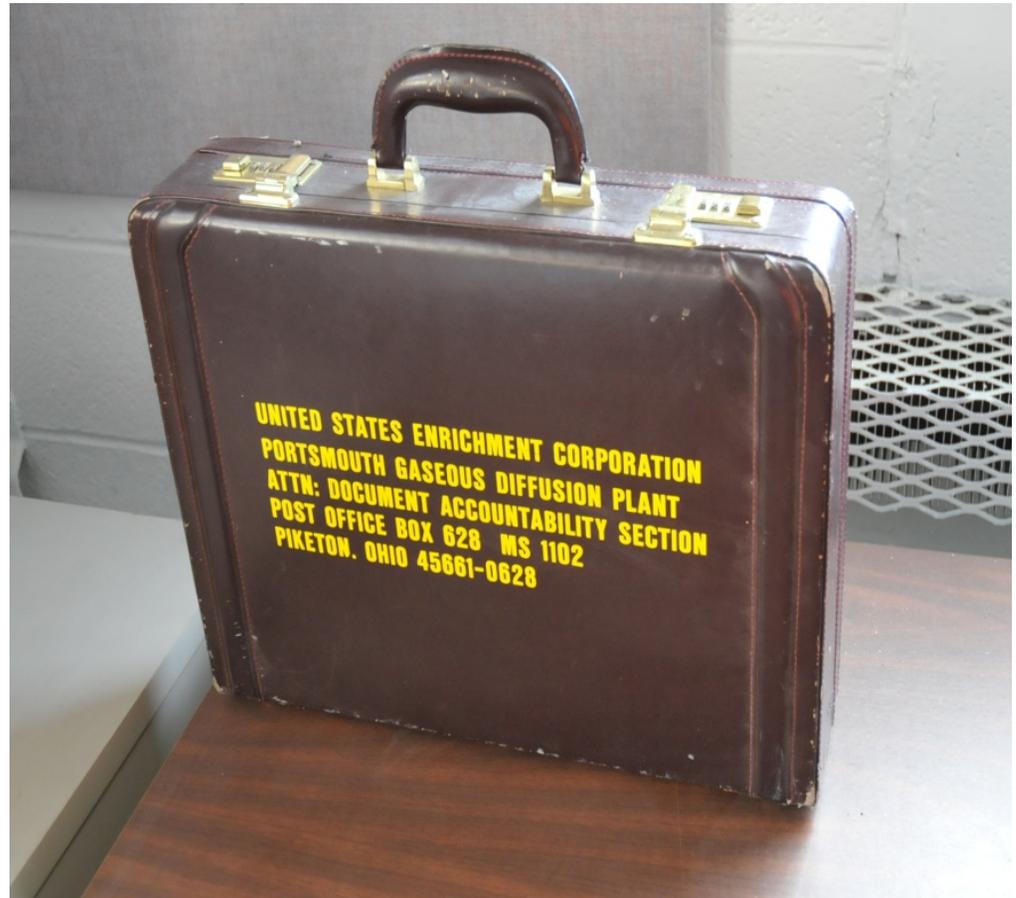
PORTS Security Force Badges / Plaques



The badges of Security Force members are displayed in the X-104 Guard Headquarters. The “Hall of Tribute” plaque (bottom right) pays tribute to security personnel who have *past away* while employed at PORTS.

PORTS Security Forces

Pillars located in the X-104 Guard Headquarters locker rooms are adorned with Security guard graffiti including names, hire and planned retirement dates, and other obscene gestures.



This briefcase was found in the former Security Chiefs' office. The brief case was used to transport security related documentation; or was it!

PORTS Security System



Security in the X-345 SNM Storage Building was heightened due to the material stored therein. This slide shows the Security camera console that was present in the X-345 Building. This security system could scan all areas of the building in seconds, and could activate special security devices at the push of a button.

Argon Gammagraph and Detector



The Argon Gammagraph (left) and detector (right) was a nuclear criticality “early” warning device; the Argon Gammagraph was utilized prior to installation of the Criticality Alarm System (CAS).

X-102 Cafeteria Cooking Equipment



The vintage cooking equipment located in the X-102 Cafeteria is some of the original equipment utilized in the cafeteria since construction in 1954. The old signage prohibiting discussion of classified matter is still in place. The old style vent unit (bottom right) is still in place since construction.

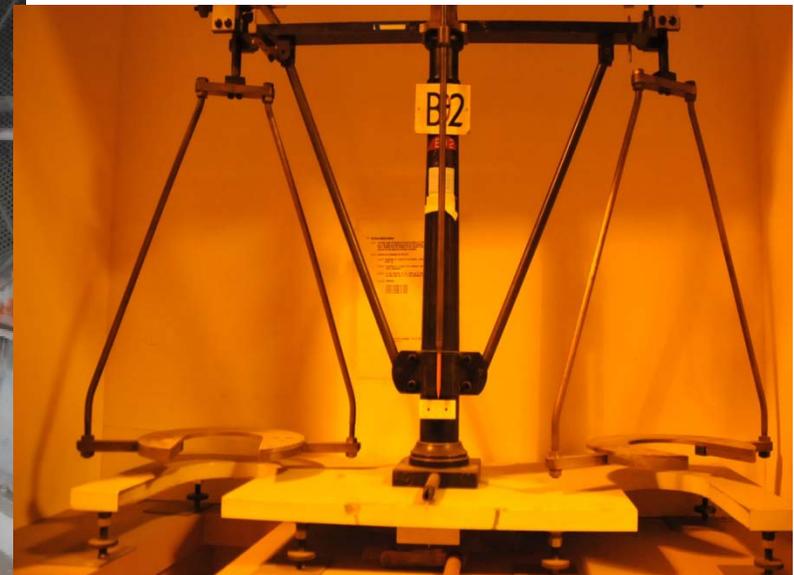
Precise Measurement: A Collection of Scales



Analytical Balance Scale
X-710 Building



Howe Measurement
Scale— X-326 Building



Accountability Scale - X-345 Building

Precise measurement was crucial to uranium enrichment operations at PORTS; a collection of scales have been identified throughout the PORTS facility; several are captured in this slide.

Precise Measurement: *Accountability Scale*



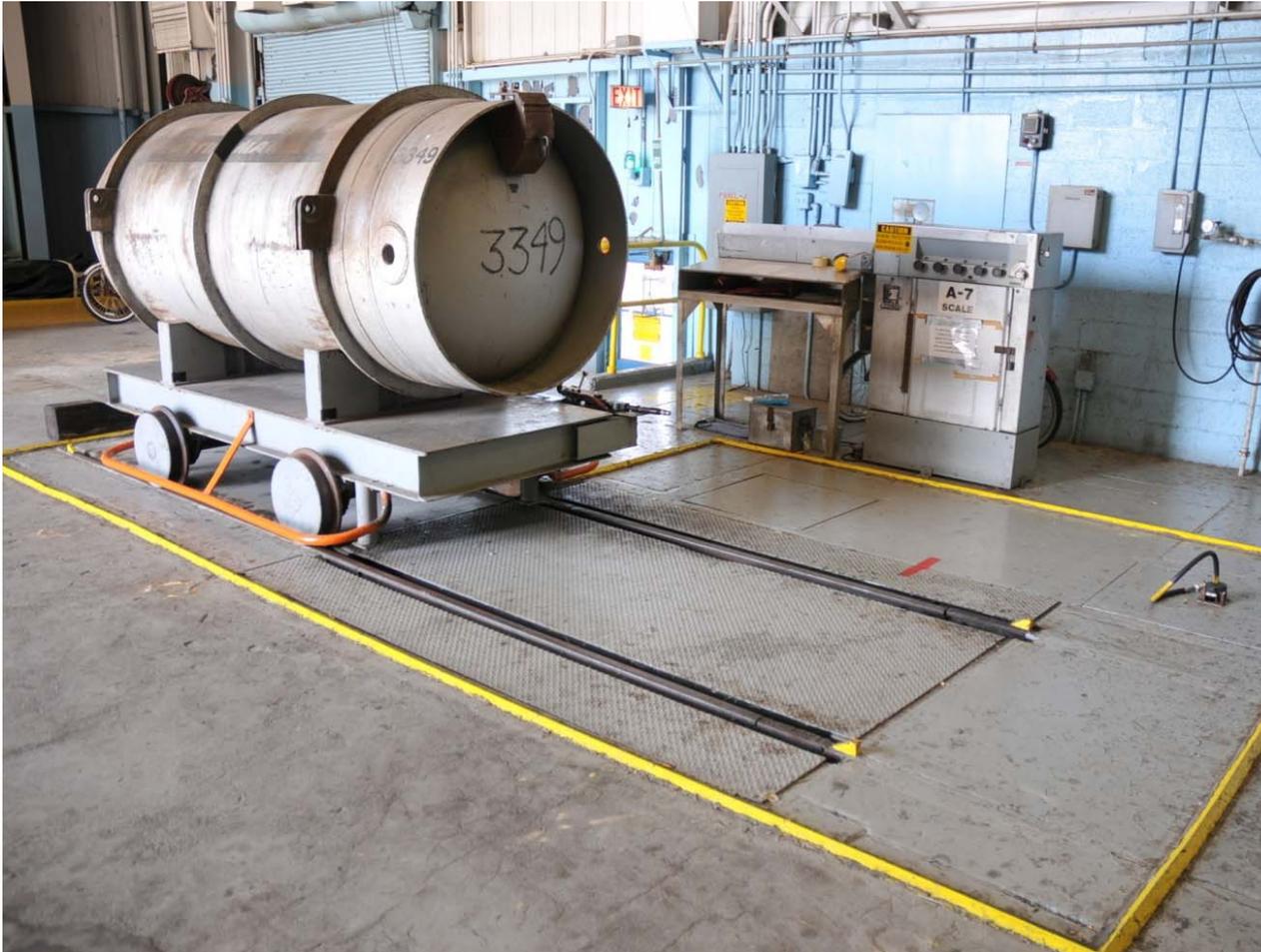
This Accountability Scale was located in the X-345 Special Nuclear Material Storage Building; measurements of 0.001/gram were achieved. The scale has been placed in the NHPA designated storage area at PORTS.

Precise Measurement: HF Scale



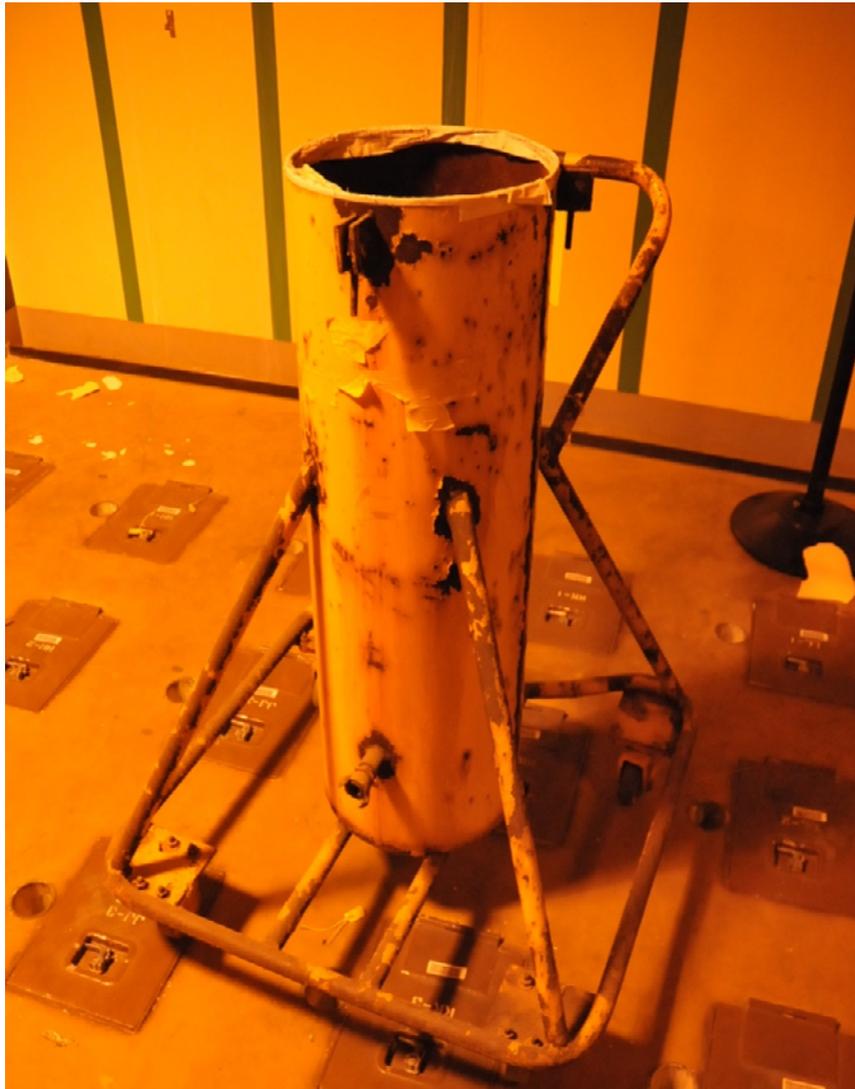
The HF Scale located in the X-342A Feed Vaporization Building was used to measure HF elements and components in the vaporization process.

Precise Measurement: UF6 Cylinder & Scale Scale



A UF6 cylinder is being weighed in the X-342A Feed ,Vaporization, and Fluorine Generation Building; the UF6 cylinder, cylinder transport dolly, and A-7 Scale are shown. One of each of these items will be held for NHPA evaluation.

12 Inch Cylinder Transport Dolly



This original 12" cylinder transport dolly is located in the X-345 SNM Storage Building. The cylinders were taken out of service by USEC/DOE because of unsafe configuration; the backside of the carts did not permit two feet spacing due to curvature.

Uranium Enrichment Convertor



Convertor is staged in the X-700 Building; several convertors are being held for NHPA evaluation and future display; it is not known if a convertor can be cleaned for public release/viewing.

X-326/X-330/333 Process Buildings

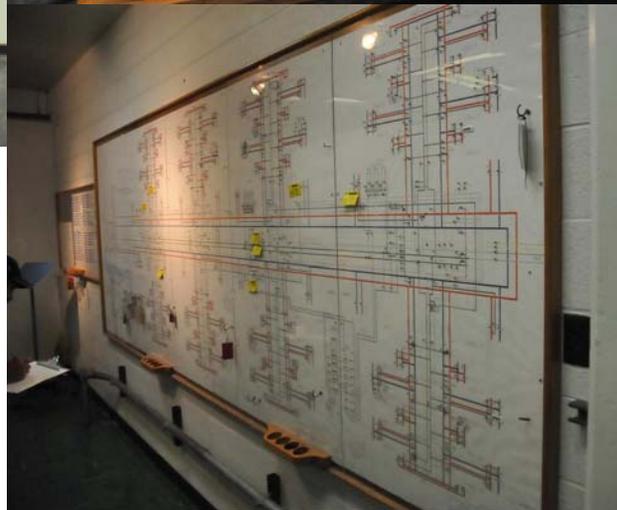
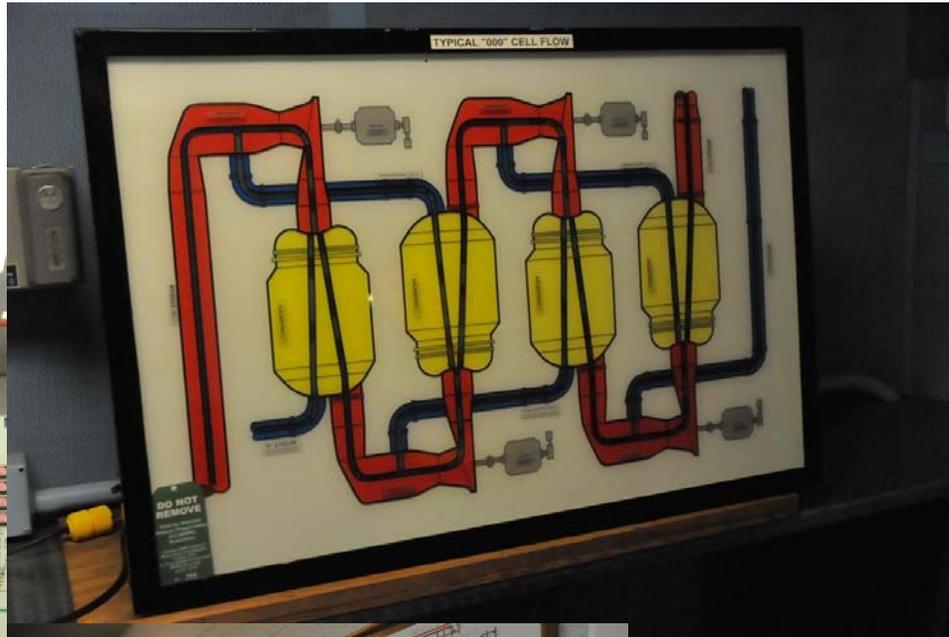


Remnants of control panels which controlled the uranium enrichment processes in the PORTS process buildings are captured. Sections (front panels) of the control panels are being held for NHPA evaluation and future display.

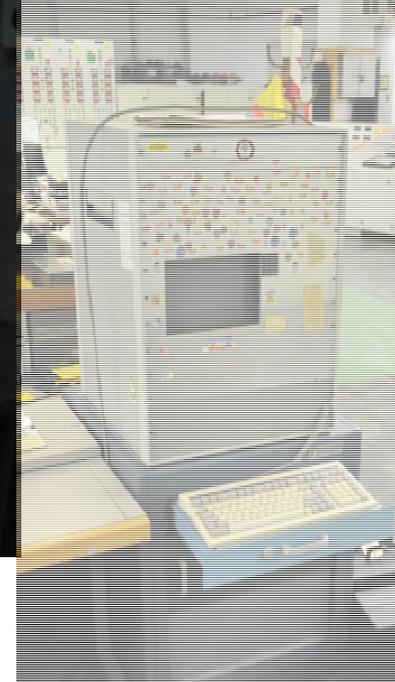
X-333 Process Building



Communication from the X-333 Process Building Control Room to the cell floor was completed via high-speed air mechanisms which transported the information via tube.



Diagrams of the flow X-333 Process Building “cell flow” is shown on the two (2) diagrams.



Tracking of uranium materials was crucial. Shown is a tracking device utilized in the X-333 Building Control Room.

Process Building Communications



An array of telephones utilized to communicate from the process X-326/X-330/x-333 Process Building control rooms to the operating cell floors are captured. Numerous telephones are being held for NHPA evaluation and future display.

Nuclear Criticality Warning Devices



Like the Argon Gammagraph, nuclear criticality monitoring devices such as the Neutron Criticality Monitor (right) were strategically located throughout the PORTS process buildings. Should the potential for nuclear criticality be detected, the horns (pictured) would sound an alarm.

Dynamic Materials Control and Accountability System (DMCAS)



The DMCAS unit is located in the X-345 SNM Storage Building as well as in the X-326, 330, and 333 several other facilities involved in the uranium material tracking process. The DMCAS was a very complex, highly regimented, electronic database which tracked the movement and transfer of uranium materials at PORTS. The system was proprietary to PORTS. DOE replaced the DMCAS with a universal system called "Landmass."

Awards of Merit (Safety) presented to Goodyear Atomic Co.



Recorder, Torque Wrench, Calibration Tools, and Levels



Salvaged Items



Compass
Measuring
Equipment



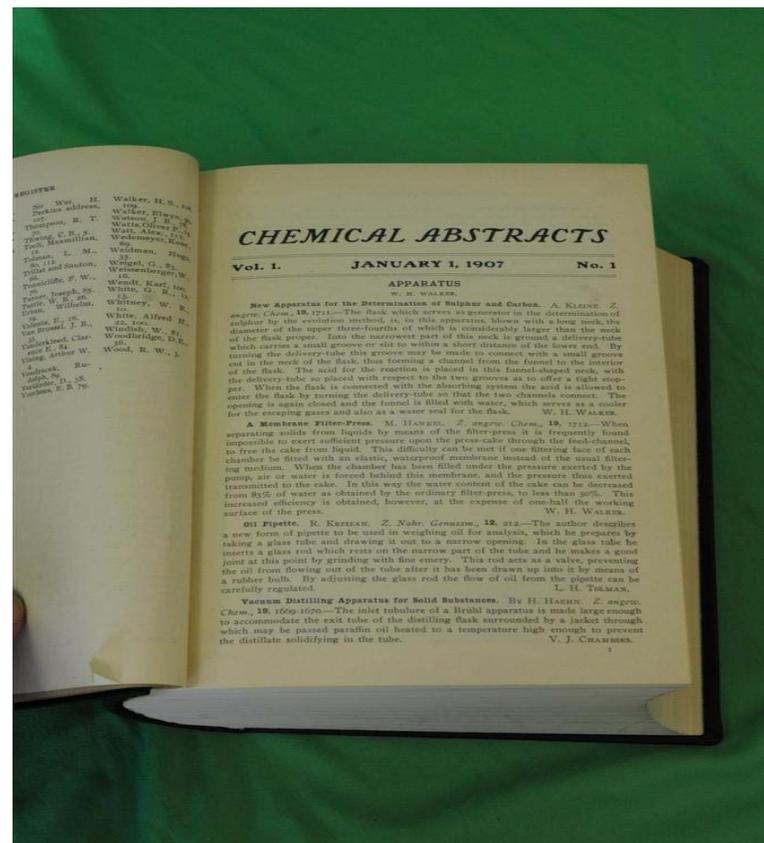
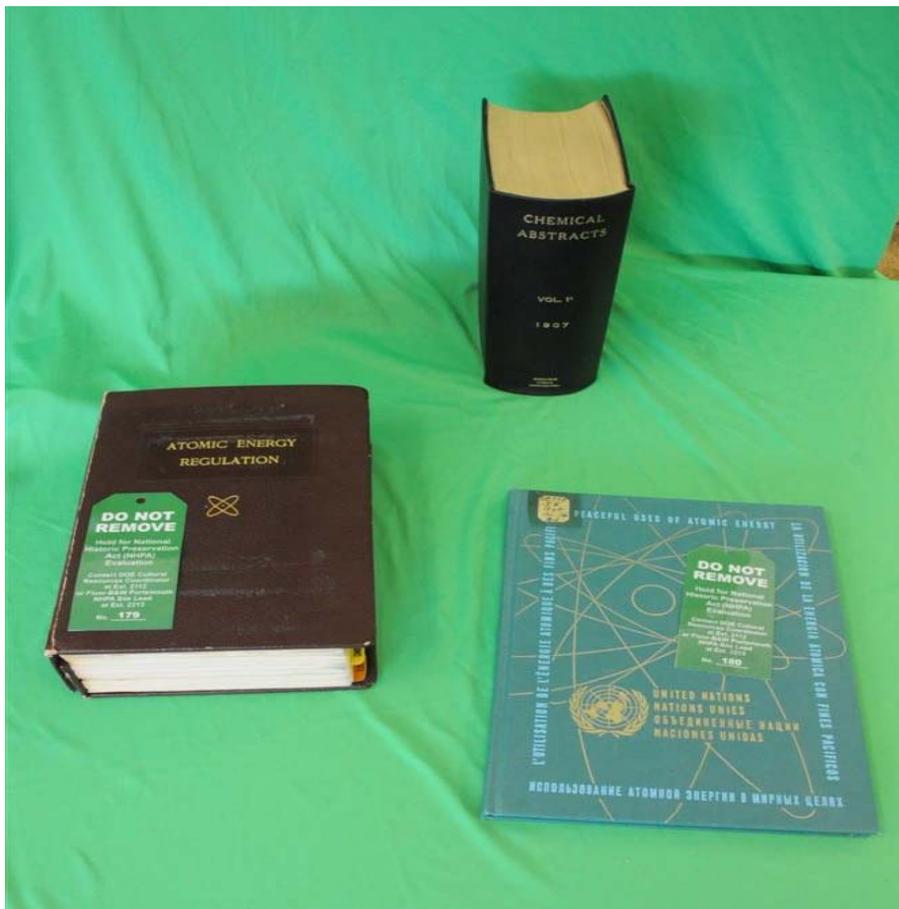
Radius
Gage Set



Slide Rules

4/10/2012

Salvaged Items



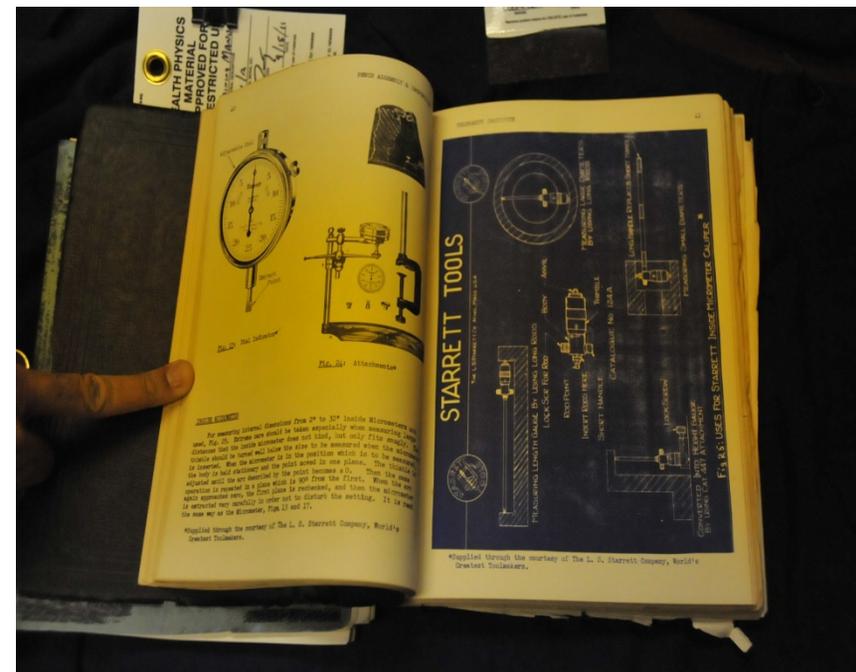
The date shown in the Chemical Abstracts document is January 7, 1907.

Chemical Abstract Books, Atomic Energy Regulation, and other documents dating back to early 1900s were stored in the X-710 Technical Services Building.

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Salvaged Items

Operations manual for precision tooling is presented.



Training manuals and operations manuals for several of the precision tools utilized during plant operation.

Salvaged Items



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Coveralls hanging on wall in X-705.

Salvaged Items



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Salvaged Items



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Salvaged Items



Salvaged Items



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Miscellaneous salvaged items from PORTS facilities

Questions?