

U.S. Radium/Safety Light Corporation

South Centre Township, Bloomsburg, PA

ANN DIDONATO

On-Scene Coordinator

US Environmental Protection Agency

Background and Issues

- *10-acre (~4-hectare) site located in Bloomsburg, central Pennsylvania – located in residential area alongside a major river – subject to flooding

- *Final US Radium Facility in operation – original ‘Radium Girls’ files stored at the Site – historic value

- *Past manufacturing activities involved radioactive materials such as radium-226, strontium-90, cesium-137, americium-241, tritium and several other radionuclides

- *Site included contaminated buildings – concern of release of radioactive materials from fire



U. S. RADIUM CORP.
BLOOMSBURG, PENNA.



USR/SLC Site Issues 2012:

- *USR/SLC – sloppy housekeeping practices during operation – causing widespread radioactive contamination - buildings not maintained
- *Location of Site in residential area, alongside a main PA river – the Susquehanna – the facility needed to be safely demolished and debris disposed
- *Contamination levels fairly ‘low’ but most building & contents were unable to be shipped to a regular sanitary landfill due to radioactive contamination
- *Transportation & Disposal (T&D) to a radioactive material disposal facility would be costly ~\$7,000 to 10,000 or more/intermodal container (IMC)
- *Other SAFE Alternatives for disposal available that would conserve taxpayer money?
Yes – Hazardous Waste Landfill (RCRA Subtitle C Landfill)
- *Radioactively contaminated demolition debris could be disposed of using “Alternate Waste Disposal” process under 10 CFR 20.2002: However, must meet facility Waste Acceptance Criteria (WAC)

CHALLENGES TO CLEANUP: Coordination Agencies/Stakeholders for Demo/disposal

COORDINATION WITH OTHER GOVERNMENTAL AGENCIES:

- *Pennsylvania Department of Environmental Protection (PA DEP) – PA an Agreement State
- *Columbia County PA Emergency Management (EMA)
- *PA State Historic Preservation Office (PA SHPO)
- *National Archives Records Administration (NARA)
- *Idaho Department of Environmental Quality (IDEQ) – Idaho a non-Agreement State
- *Nuclear Regulatory Commission (NRC)

STAKEHOLDER CONCERNS/ISSUES:

- *Nearby Residents – flooding caused release to downstream property
- *Columbia County Fire Chiefs – what to do in case of a fire?
- *'Activist' – discontented with everything
- *Columbia-Montour Coalition for Source Water Protection (CMCSWP) – protection of Susquehanna River
- *Columbia County Schools – possible future use for sports fields
- *Columbia County Commissioners – future use for property (for taxes)

Alternate Waste Disposal

Radioactively contaminated building demolition debris disposed of using “Alternate Waste Disposal” process under 10 CFR 20.2002

§ 20.2002 Method for obtaining approval of proposed disposal procedures

A licensee or applicant for a license may apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to dispose of licensed material generated in the licensee's activities. Each application shall include:

- (a) A description of the waste containing licensed material to be disposed of, including the physical and chemical properties important to risk evaluation, and the proposed manner and conditions of waste disposal; and
- (b) An analysis and evaluation of pertinent information on the nature of the environment; and
- (c) The nature and location of other potentially affected licensed and unlicensed facilities; and
- (d) Analyses and procedures to ensure that doses are maintained ALARA and within the dose limits in this part.

Complications for Alternative Disposal:

- *USR/SLC held a NRC license for radium/PA DEP license for all other isotopes

- *Pennsylvania – location of generating facility is an *'Agreement State'*

- *Idaho – location of disposal facility is a *'Non-Agreement State'*



- ***Agreement State:** A State that has an **agreement** with the **NRC** authorizing the **State** to regulate certain uses of radioactive materials within the **State**.

- ***Non-Agreement State:** NRC needs to approve Alternative Disposal

Coordination with Agencies:

Radionuclide	Disposal Concentration (pCi/g)
²²⁷ Ac	0.3
²⁴¹ Am	5
⁶⁰ Co	0.2
¹³⁷ Cs	25
³ H	500
⁶³ Ni	60
²³⁷ Np	0.3
²¹⁰ Pb	140
²²⁶ Ra	50
⁹⁰ Sr	500

← Isotope concentration of buildings determined - contamination 'present primarily as surface and volumetric contaminants on walls, ceilings, floors and on other equipment'

*Analysis completed to determine risk - acceptable cancer risk range of 1 E-4 to 1 E-6. 'EPA considers the proposed transport and disposal activities to be protective of human health and the environment'.

*RCRA C Disposal Facility in Idaho could accept debris per average concentrations submitted – under WAC

*EPA requested approval of PADEP as Pennsylvania is an Agreement State – PA DEP Bureau of Radiation Protection informed of actions weekly: PA DEP Approved

Coordination with Agencies, Cont:

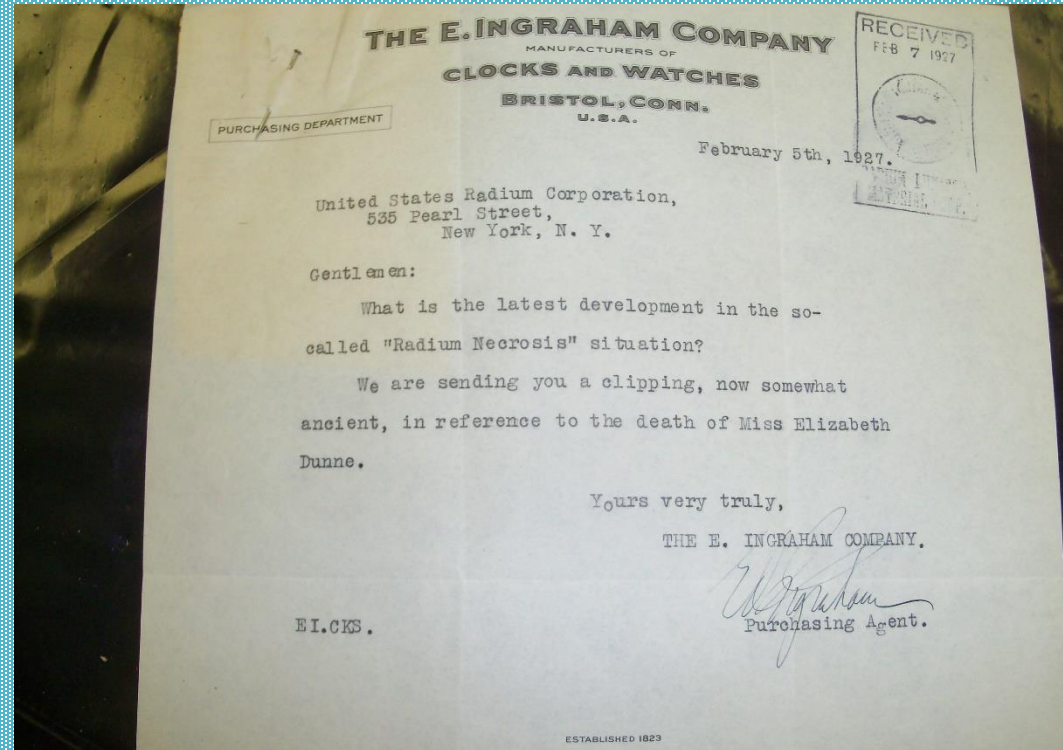
- *Facility requested a State Concurrence by Idaho Department of Environmental Quality – IDEQ Approved
- *Disposal Facility requested approval of NRC as Idaho is not an Agreement State – NRC Approved after 4 months review
- *NRC Approval by far the longest and most difficult issue faced
- *EPA coordinated with Columbia CO EMA about shipping schedule to rail line, included contact information with truck shipping papers (in the case of vehicle accident) and informed 911 operators co-located with EMA in the event of a traffic incident
- *NARA/PA SHPO – historic files – several year process

US Radium Facility Files: 'Radium Girls' – early 1900's

- *As the final USR facility, many original files from the Orange, New Jersey and NYC facilities were shipped to the Site
- *These documents had great historical value, however, were universally contaminated with radium – and H3 as they had been stored in the tritium building
- *OSC spent several years attempting to find a permanent home for the original documents
- *OSC worked with the National Archives Records Administration to accept scanned copies of the documents
- *EPA contractors spent approximately 6 weeks scanning the documents
- *Original documents unfortunately must be disposed of at RCRA C Landfill – PA SHPO in the end pleased that scanned copies of documents were preserved
- *Documents are now available to the public online

Ex: Handwritten
Letters/Medical
Records/News
Clippings, Legal
Documents

April 25, 1927



Custodial History:

The original paper versions of the records in this series were stored by the United States Radium Corporation and its successor the Safety Light Corporation at the corporation's Bloomsburg, Pennsylvania facility. This facility became an Environmental Protection Agency Superfund Program project site (identification number PAD987295276) and in the course of the agency's activities these records were identified by the Region 3 Historic Preservation Officer as being of permanent value. Due to the radioactive contamination of the original paper versions the records were, with the consent of the Safety Light Corporation, scanned and the resulting digital images transferred to the National Archives and Records Administration. The original paper versions of the records were subsequently destroyed.


THE UNITED STATES DAILY: THURSDAY, JULY 19, 1928

Watch Dial Painters Subject to Poisoning By Radioactive Paint

Labor Department Reviews
Cases Recently Under Liti-
gation and Other In-
stances Reported.

The Department of Labor has just made public a statement regarding industrial poisoning cases among watch-dial painters. It tells of the settlement of a case brought against the United States Radium Corporation by five women employes and of a former official of that corporation, now victims of radium poisoning.

CHIVES.GOV LOGIN REGISTER VETERANS' SERVICE RECORDS HELP API CONTACT US


adium  Advanced Search

Return to Search Results

Record Hierarchy

Collection SLC:
Safety Light Collection


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a tag...

over view: 10 pages 

Comment
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gin | Policy | Need Help?

Safety Light Collection, 1916 – 1949

 **This Collection contains records, some of which may not be available online.**
To obtain a copy or view the records, please contact or visit the National Archives and Records Administration location(s) listed in the Contact information below.

Additional Information About this Collection

National Archives Identifier:

75509879

Level of Description:

Collection

Collection Identifier:

SLC

Contact(s):

National Archives at College Park - El
National Archives at College Park
8601 Adelphi Road
College Park, MD, 20740-6001
Phone: 301-837-0470
Fax: 301-837-3681

Details



<https://catalog.archives.gov/id/75509879>

National Archived Records Administration

Coordination with Stakeholders

- *Nearby Residents – many had family that were former USR/Safety Light employees – EPA kept residents regularly informed of Site activities throughout the process –
- *Resident - property impacted by Site contaminants through flooding – cleanup completed
- *Columbia County Fire Chiefs – EPA attended Fire Chiefs meeting several times during cleanup to update and recommend ‘Surround and Drown’ in case of a fire in consultation with PA DEP
- *‘Activist’ – One activist had moved to area – frequent communication
- *Columbia-Montour Coalition for Source Water Protection – attended meetings and gave presentations - sampled river to identify issues
- *Columbia County School District/Columbia County Commissioners – Coordinated for possible future use as open space/other property use (discussions still ongoing)



Photo Source: *Press Enterprise*

Summary:

Alternative Disposal under 10 CFR 20.2002/Preservation of Important Historic Documents:

- *Somewhat onerous paperwork process but close coordination with Pennsylvania Regulators was the key to positive outcome

Coordination with Stakeholders:

- * Continuous communication with the residents and other local stakeholders was complicated but worth the effort. Close relationship with Pennsylvania = assistance from PA DEP with issues as they arose

- *Numerous times PA DEP BRP staff would troubleshoot issues with stakeholders and attend meetings to show State support of action and EPA

Questions?

Thank You!

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