

From: [Chris Pugsley](#)
To: [Orlando, Dominick](#)
Subject: FW: Attached Image
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Attachments: [0510_001.pdf](#)

Good morning:

Harley Shaver asked me to forward this to you. It is the other pages to a citation noted in Western Nuclear, Inc's site closure memorandum from July, 2014. Please let me know if you have any questions and I look forward to seeing you next week. Is there a bridge line for the meeting as I believe Tony will be doing it via phone.

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From: cseaton@athompsonlaw.com [mailto:cseaton@athompsonlaw.com]
Sent: Sunday, March 08, 2015 1:27 PM
To: Chris
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Alternate Concentration Limits

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**Office of Nuclear Material Safety and Safeguards
Division of Fuel Cycle Safety and Safeguards
Fuel Cycle Facilities Branch
Uranium Processing Section**

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June 2003

ALTERNATE CONCENTRATION LIMITS

REGULATORY FRAMEWORK:

10 CFR Part 40, Appendix A, Criterion 5B6

Licensee can submit ACLs that present no significant hazard and must provide the basis for any proposed limits including consideration of practicable corrective actions, that limits are as low as reasonably achievable, and information on the factors the Commission must consider. The Commission will establish a site specific alternate concentration limit for a hazardous constituent if it finds that the proposed limit is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded.

2

June 2003

NRC Guidance:

NUREG-1620 Section 4.3 and appendix K (4.4.3. for models)

Point of Compliance: A location at which the groundwater is monitored to determine compliance with groundwater protection standards. Objective is to provide the earliest possible warning of a release into the environment from the impoundment. The POC is defined as the intersection of a vertical plane with the uppermost aquifer at the hydraulically downgradient limit of the waste management area.

NRC Guidance (Contd.):

Point of Exposure: Location where people, wildlife, or aquatic species could reasonably be exposed to hazardous constituents from groundwater contamination from mill activities. The point of exposure does not have to be a point but can be a stream or property boundary.

ACL Applications

Approved:

- Arco Bluewater
- Exxon
- Bear Creek
- Petrotomics
- L-Bar
- Umetco
- Pathfinder Lucky Mc
- Title I sites - Canonsburg, Old Rifle

ACL Applications

Under NRC Review:

- WNI Split Rock
- PMC - Shirley Basin
- Rio Algom - Quivira
- Rio Algom - Lisbon
- Title I sites - New Rifle

Lessons Learned

- Characterize contamination fully
- Impact to surface waters
- Models - Calibration, submit input files
- Account for uncertainty
- Post-remediation monitoring program
- Off-site contamination
- Water rights, mineral rights, land ownership

Emerging Issues with ACLs

Off-site groundwater contamination (NUREG-1620)

- Attempt to remediate contamination
- Attempt to keep POE at long-term care boundary that will be controlled by long-term care custodian.
- If that can not be achieved, a “good-faith” effort must be made to acquire the land between the license area boundary and the POE.
- If land can not be acquired through a “good faith” effort, then institutional controls other than ownership may be considered on a site-by-site basis.

Emerging Issues with ACLs

Institutional Controls

- Not in regulatory framework for UMTRCA Title II (10 CFR Part 40)
- Site specific evaluation, must be enforceable, durable, legally defensible
- Alternatives provision of 10 CFR Part 40, Appendix A
- DOE consultation
- State consultation

Examples of Various Institutional Controls and Their Relative Attributes:

Institutional Control	Attributes	Description
Transfer, in fee, to DOE	Most effective IC, i.e., defensible, durable, enforceable. DOE owns the site and materials.	Provided for in the Uranium Mill Tailings Radiation Control Act of 1978 and Appendix A of 10 CFR Part 40. Transfers land and materials at processing site to DOE. DOE, as the owner of the site, can restrict entry on the property, as well as the use of the surface and subsurface property, and can enter onto the property in order to maintain and enforce restrictions on the land.
Subsurface Estates, transferred, in fee, to DOE	Legally defensible, durable, and enforceable	Establishes a dominant and a servient estate. If DOE owned, for example, the subsurface estate, DOE could prevent the owner of the servient estate access to groundwater.
Easements	Legally defensible, durable, and enforceable - more durable if it runs with the land as in this case	Traditional tool of property law. Typically gives the owner of one parcel the right to cross the adjacent property, i.e., a "right of way". It would allow DOE to enter onto the land to enforce restrictions.
Restrictive Covenants/Negative Easements	Legally defensible, durable and enforceable- but can be problematic	Typically prevents future purchasers or successors from using the land in a certain manner, e.g., drilling new wells. It allows DOE to enter onto the land to enforce restrictions.
Deed Notations	Not durable or enforceable	Serve an informational purpose only. If information is located in deed, it can be lost within a short time for a variety of reasons. DOE cannot use it to enforce restrictions.

Emerging Issues with ACLs (Contd.)

Institutional Controls (Contd.)

- **Split Rock Site: Status**
 - “good faith” effort to acquire land
 - Licensee supplemental modeling
 - Comments from the Wyoming DEQ
 - Comments from the DOE
 - Commission will decide on policy