

Meeting of the Northwest Interstate Compact on
Low-Level Radioactive Waste Management
SeaTac Airport Hilton
Seattle, Washington
May 5, 2009

Present:

Doug Dasher, Alaska
Russell Takata, Hawaii
Brian Monson, Idaho
Roy Kemp, Montana
Ken Niles, Oregon
Bill Sinclair, Utah
Larry Goldstein, Washington
Carl Anderson, Wyoming
Alice Blado, Compact Counsel
Kristen Mitchell, Compact Counsel
Lynn Noah, Compact Staff
Mike Garner, Executive Director

Compact Chair, Mr. Larry Goldstein, convened the meeting at 9:00 a.m. The Committee unanimously approved a motion to adjourn to Executive Session during the lunch hour to discuss the ongoing lawsuit. The committee then approved the minutes for the May 5, 2009 meeting.

Party State Reports

Mr. Doug Dasher reported an Alaskan salvage firm shipped steel pipes from Prudhoe Bay to a salvage firm in Washington. The shipment set off the alarms at the Washington facility, most likely due to radium contamination. The pipes were then shipped back to the Alaskan firm.

Mr. Russell Takata reported the Army continues its efforts to resolve the uranium issue associated with its Davy Crockett System. NRC is contemplating issuing a license for the older depleted uranium at the facility.

Mr. Brian Monson reported AREVA plans to begin construction on its uranium enrichment plant in Idaho Falls in 2011. Their application was recently amended, as they want to double the size of the proposed facility. The company projects the facility will provide 300 full time jobs. Senator Crapo has introduced legislation to secure a two billion dollar loan guarantee from the U.S. Department of Energy (USDOE) for the enrichment facility.

Mr. Ken Niles reported there were two minor transportation accidents this winter involving low-level radioactive waste (LLRW) shipments. One occurred in late December, just west of LaGrande, Oregon when the driver of the truck transporting waste to Perma-Fix NW hit a patch of black ice, jackknifed, and slid against a rock wall on the side of the freeway. No release occurred. The truck was hauled to a tow yard until the shipping company could offload the waste onto another truck. The second accident occurred in January in eastern Oregon. A truck

hauling waste from Puget Sound Naval Shipyard was rear ended by a driver who had fallen asleep. There was minimal damage to the truck.

Mr. Roy Kemp reported Montana's legislative session did not include any legislation pertaining to LLRW. The interest in in-situ mining of uranium toward Montana's southern border has subsided.

Mr. Carl Anderson had nothing to report for Wyoming.

US Ecology Washington Activities

Mr. Mike Ault, Facility Manager, reported the Richland facility accepted approximately 23,000 cubic feet of low-level waste in 2008. The company projects the facility will receive a comparable volume of low-level waste in 2009. The facility accepted less than 10,000 cubic feet of Exempt and NARM waste in 2008 and volumes for these wastes are down during the first quarter of 2009.

The 2008 revenue requirement for operation of the Richland facility was 5.1 million dollars. The company collected 5.8 million dollars and rebated 700,000 dollars to regional generators. The revenue requirement for 2009 is 5.2 million dollars.

Utah Activities

Mr. Bill Sinclair reported Utah's 2009 legislative session did not include any legislation involving radioactive waste. EnergySolutions promoted a proposal during the last two weeks of the session stating the company would be willing to give the state hundreds of millions of dollars from the profits associated with the importation of foreign waste in exchange for the state's support on this issue. Governor Huntsman took a strong stand, indicating he would veto any legislation supporting the proposal. Although some legislators initially supported the proposal, it did not move forward. The legislature included no items on the study list for the 2009 interim session.

Utah renewed Energy Solutions' operating license a couple years ago. Mr. Charles Judd, Cedar Mountain Environmental, appealed the renewal. There have been hearings before the Radiation Control Board over the issue of Mr. Judd's standing, including a January 9th hearing, where the Radiation Control Board determined Mr. Judd did not have standing. Mr. Judd appealed the Board's decision to the Utah Court of Appeals.

Mr. Sinclair reported a previous agreement with the Governor allows EnergySolutions to convert the unused portion of the 11e.(2) cell to LLRW disposal. EnergySolutions has submitted an amendment to the Division of Radiation Control for review. The major issue associated with the amendment is eventual ownership of the disposal cell. USDOE is obligated to take ownership of the 11e.(2) cell as part of the Uranium Mill Tailings Act. Utah needs to resolve how the ownership issue will be impacted by the conversion of the unused portion to LLRW disposal.

The price of uranium has dropped significantly and this has led to a cessation of most uranium mining efforts. The White Mesa Mill has been processing ore, but may again consider alternative feed material. The interest in reopening the Shootaring Canyon Mill has ebbed.

Decommissioning is underway at two uranium mill sites. The first shipment of the tailings pile at the Moab mill site took place on May 4, 2009. Removal of the thirteen million ton tailings pile is expected to cost one billion dollars and be completed by about 2019. The pile is being moved to a repository USDOE built near Crescent Junction, Utah.

The Radiation Control Board has been inundated with concerns over depleted uranium disposal. Depleted uranium has always been classified as Class A waste. Recently, issues have been raised as to whether this is an appropriate classification because it gets hotter as it decays and becomes pretty hazardous after a long period. The U.S. Nuclear Regulatory Commission (NRC) is holding discussions on the depleted uranium issue and plans to pursue a rulemaking to require individual site assessments for each site that has received or will receive depleted uranium. Interest groups in Utah will bring this issue before the Radiation Control Board in May 2009.

Mr. Sinclair reported waste disposal fees fund the majority of Utah's regulatory activities. All fees collected are pooled into the Environmental Quality Restrictive Account and are then allocated by the legislature within the Department of Environmental Quality. Due the economic downturn, revenue from these fees has declined. Utah will attempt to resolve this funding issue this summer.

Low-Level Waste Forum Meeting Overview

Mr. Sinclair reported on issues discussed at the Low-Level Waste Forum meeting held in Columbia, South Carolina in March 2009.

- South Carolina sent a clear message that the Barnwell site will be limited to in-region low-level waste in the future. It will not reopen as a national disposal site.
- The Texas Compact Commission was recently formed. Site development moves forward, and the facility could accept waste at its sites as early as 2010.
- There will be changes in federal agency policy as a result of the new administration.
- The Nuclear Energy Institute (NEI) made a presentation regarding how parties can work together toward a national solution.
- There is a USDOE initiative addressing the lack of disposal access for sealed sources that pose a national security risk.
- Industry is very interested in concentration averaging.
- There is interest in ensuring depleted uranium can safely be disposed.
- There is some interest in re-assessing the waste classification system.

Washington Overview

Mr. Goldstein projects the Remedial Investigation at the US Ecology site will be finished by December 2010. A Feasibility Study will be developed in 2011, and the Cleanup Action Plan will hopefully be available in early 2012. There are now four quarters of vadose zone sampling and five quarters groundwater sampling. Of the more than 50,000 reported results, less than one percent have been rejected. Nitrate was found in more than 75% of the soil samples, and hexavalent chromium in roughly one third of the samples. Four compounds were identified as contaminants of concern from the soil gas: trichloroethane, chloroform, chlorotrifluoroethane, and 1,1,2-trichlorotrifluoroethane. Most of these were at levels 2 to 5 times more than screening levels. Groundwater samples identified four constituents that exceeded the protective screening levels: hexavalent chromium, trichloroethane, chloroform, and arsenic.

The agencies anticipate completing the draft remedial investigation report within the next month. The agencies also plan to propose an interim remedial action. The action is to begin construction of the lower layer of the cover over filled trenches, the preferred alternative in the May 2004 Environmental Impact Statement. Prior to moving forward, Ecology needs to publish an Interim Remediation Action Report and run the proposed action through the SEPA process. If the agency receives ten or more requests for a public meeting, a meeting will be held.

Ecology has a \$9 million capital appropriation for closure but spending authority still needs to be secured. The bid estimates to construct the lower layer of the cover range from 7.5 – 8.5 million dollars. The bids include \$1.2 – 1.8 million dollars for moving ERDF soils, but we may be able to save this money. As a result of the federal stimulus money, the DOE has offered to provide up to 800,000 cubic yards of soil from the ERDF project. If analysis concludes the soils are consistent with the cover requirement specifications, the ERDF soils will be stockpiled on filled trenches. This could save approximately two million dollars. However if the soils must be obtained off-site, the source and cost of such soils is unknown. The groundwater and vadose zone wells will likely need to be extended. US Ecology is working on developing a request for proposal for a construction contractor.

The latest amendment to the cover contract increases the scope and budget for completion of the final cover design. This is controversial, as some stakeholders do not understand how the agencies can proceed with a final design before the remedial investigation is completed. This amendment includes funds for analysis of the suitability of the ERDF soils as well as site preparation for acceptance of soils.

The cover selected for the facility is a geo-synthetic evapo-transpiration design. It consists of six to eight feet of sub-grade soil, another 0.5 feet of compacted soil incorporating a 60 mil HDPE geo-membrane. Extension of the groundwater and vadose zone wells will likely be required. A robust vapor extraction system will be incorporated into the lower layer of the cover to address the volatile and semi-volatile compounds that will continue to emanate from the soil. This system will enable the vapors to be captured, treated, and disposed. The subcontractor projects the cover design will be finished by July 7, 2009.

Last month we held a public workshop to present the Data Quality Objective process that was used to form the sample design, sample collection methods, analyzing methods, and data that has been collected.

As a result of an eight billion dollar deficit in Washington State, the legislature considered taking three million dollars from the Site Closure Fund. After being made aware of the surety requirements, no funds were taken.

Mr. Goldstein reported the Hanford Tank Closure Waste Management EIS is likely be issued within the next couple months. This document will contain information about the source term present at the Hanford site. The comment period for this document review has been extended to 120 days.

Mr. Niles reported that some members of the general public believe the US Ecology site is being treated differently than the USDOE site. Mr. Goldstein indicated there are two different

regulatory regimes and it is difficult to compel a facility to take actions that are inconsistent with NRC regulations.

Mr. Robertson, Director of the Washington State Department of Health Office of Radiation Protection, stated secondary containment is used at the Richland commercial disposal facility for those wastes containing long-lived radionuclides.

U.S. Nuclear Regulatory Commission Low-Level Radioactive Waste Briefing Meeting

The U.S. Nuclear Regulatory Commission (NRC) held a briefing meeting on low-level waste at its headquarters on April 17, 2009.

NRC staff presentations included the following highlights:

- Generators anticipating Barnwell's closure shipped Class B/C wastes for disposal.
- Adequate disposal capacity available but some lack disposal access.
- No disposal pathway available for Greater than Class C (GTCC) waste.
- Waste classification could be more risk informed and performance orientated.
- The Branch Technical Paper on concentration averaging has been updated.
- Developed guidance for extended storage of LLRW .
- Concentration averaging/blending involves industry initiatives that will generate stakeholder issues.
- Studsvik, under its license with the state of Tennessee, co-mingles waste from multiple generators and then thermally processes the waste. Following processing, all waste is attributed to Studsvik and shipped to Waste Control Specialists for storage.
- Bear Creek has approval to conduct a pilot project to evaluate processes for concentration averaging that allows Class B/C wastes to be co-mingled with Class A wastes. The resulting waste is a Class A waste that will potentially will be disposed at Energy Solutions' Clive facility.
- Fourteen reactors are presently being decommissioned. Reactor waste generation will increase toward 2030 when an additional 34 reactors will start decommissioning.

Mr. Michael Ryan – Advisory Committee on Reactor Safeguards

- Concentration is best used as a metric for operational risk.
- Quantity best used as a metrics for disposal risk.
- Areas for future improvement:
 - Emphasis on a risk informed approach for LLRW management.
 - RCRA Subtitle C & D are suitable for certain types of LLRW and low activity waste.
 - Risk informed assessments of individual disposal facilities.

Mr. Frank Marcinowski – USDOE Deputy Assistant Secretary for Regulatory Compliance

- Radioactive wastes managed under USDOE 435.1 regulatory requirements.
- Prefer on-site disposal.
- Commercial options used when cost effective.
- 10 CFR 61.55 waste classifications only apply to DOE waste when shipped to licensed treatment and disposal facilities.
- USDOE generated 88% of the LLRW and mixed LLRW disposed in our country to date.
- FY09-FY08: 70% of USDOE waste was disposed onsite, 10% at other USDOE facilities and 20% at commercial facilities.

- USDOE projects it will generate 2.2 million cubic meters of LLRW and mixed LLRW between FY09 and FY15
- USDOE is preparing an EIS for disposal of GTCC waste. 11,000 cubic meters of stored and projected GTCC waste. 7,300 cubic meters of commercial and 3,700 of USDOE GTCC waste.
 - Disposal alternatives being examined by EIS
 1. Deep geological at facilities such as WIPP
 2. Enhanced near surface burial at Hanford, Idaho National Lab, Los Alamos, etc.
 3. Intermediate depth borehole at same locations
 - USDOE is hoping to issue final EIS in 2010.
 - Before issuing the Record of Decision, USDOE must submit a report to Congress and await congressional action.

Ms. Abigail Cuthbertson – USDOE Project Manager for the Office Source Recovery Project within the Office of Global Threat Reduction

- The mission is to recover and permanently dispose of excess radiological sources in U.S.
 - 21,243 sources have been recovered as of 3/31/09.
 - 700,000 curies of activity.
- Challenge finding disposal for the sources.

Ms. Susan Jablonski – Director, Radioactive Materials Division, Texas Commission on Environmental Quality

- Texas will file a condemnation proceeding for the remaining mineral rights at the WCS site.
- The Secretary of Energy must accept title to the federal waste disposal facility prior to disposal of any federal wastes.

Mr. Todd Lovinger – Executive Director, LLW Forum

- The current system has allowed Texas/Waste Control Specialists to reach the point of developing a new facility. This is a major milestone.
- States are unwilling to host LLRW disposal facilities without the authority provided by compacts to control wastes received.
- As NRC considers changes to its present regulations, the impact on existing and proposed facilities should be carefully considered.
- Two emerging issues:
 - Disposal of sealed sources that present a national security risk.
 - Waste resulting from a potential radiological dispersal device.

Mr. Mike Blevins – Nuclear Energy Institute

- Industry issued a white paper in December 2008
 - Objectives
 - 1) Implement safe, secure interim storage.
 - 2) Establish reliable disposal options with predictable costs.
 - Principles
 - 1) Prefer disposal to storage.
 - 2) Regulations should not restrict safe LLRW management options.
 - 3) States/compacts are key to enabling LLRW managing options
 - 4) Open and competitive markets best facilitate development of cost effective options

- Long-term industry actions

- 1) Engage states/compacts and federal agencies in developing an integrated national strategy for the safe management of LLRW
- 2) Propose changes to NRC regulations
- 3) Consider possible legislative action

Mr. Mike Zittle – Assistant Radiation Safety Officer at Oregon State University

- Generator concerns include:

- 36 states lack B/C access
- Prohibitively high disposal costs
- Lack of free market competition
- Cost and security challenges associated with on-site storage.

- Consider repealing Act to create competition

Overview of Perma-Fix Northwest-Richland, Inc. Operation

Mr. Richard Grondin, Vice President and General Manager, reported the Richland facility was started by Allied Technology Group and then was acquired by Nuvotec from bankruptcy court. Perma-Fix purchased the facility in June 2007. Perma-Fix employs approximately one hundred employees at the low-level and mixed radioactive waste treatment facility.

The facility has two radioactive materials licenses: one for low-level waste and one for mixed waste. The operation also has a RCRA Part B permit issued by EPA and Department of Ecology and several air permits.

The low-level waste processing facility consists of two parts that include non-thermal and thermal treatment capabilities. The non-thermal side focuses on volume reduction and repackaging for both in-region and out-of-region compact waste as well as USDOE waste from the Hanford facility. The thermal portion contains two bulk processing units (BPU). BPU #1 works well for segregating waste from generators who do not want their waste to be co-mingled with waste for other generators. BPU #2 operates on a continuous feed and is used in those cases where generators are not concerned about their wastes being co-mingled with other generators waste. The company does a lot of work with the USDOE legacy waste at the Hanford facility.

The facility performs macro encapsulation of mixed waste and USDOE-Hanford and other USDOE facilities are its biggest customers for this service. The facility also possesses TRU waste sorting, segregation and verification capabilities. Any TRU wastes that are less than 100 nanocuries per gram do not need to be disposed at the WIPP facility.

Following our purchase of the facility, Perma-Fix implemented a preventative maintenance and an industrial hygiene program. Employees are pleased with this program as they can now shut down any process due to safety concerns.

Upon purchasing the company, Perma-Fix made an agreement with the Department of Ecology to dispose of the mixed waste inventory on site within 90 days. This was accomplished in 60 days. Perma-Fix also made an agreement with Health that dealing with the legacy low-level waste. This amounted to approximately two million pounds and the goal was to dispose of the complete inventory by September 2008. This goal was not achieved but the inventory has been

reduced to less than 50,000 pounds. The legacy low-level waste has been disposed at Energy Solutions and US Ecology.

An outside engineering firm is helping redesign the air filtration system for the LLRW side of the operation.

Transportation Issues/Concerns

Mr. Niles reported that a December accident near LaGrande, Oregon sparked political awareness of radioactive waste transportation. In the past there have been circumstances that increased December transport of radioactive wastes. These include closure of the US Ecology facility to states outside the compact; disposal fee rate increases; and contract issues with USDOE. Oregon would prefer that radioactive waste shipments do not increase during winter months when driving conditions can deteriorate due to weather conditions.

Mr. Niles stated that if organizations such as US Ecology, Perma-Fix, and USDOE are contemplating changes, it would be appreciated if they implemented such changes during the summer. Therefore, if the change resulted in increased shipments prior to implementation, it would occur during a time period when driving conditions are most favorable. This is preferred even though in the last 15 years it has not really been an issue.

Committee Business

EnergySolutions' Lawsuit Update

Ms. Alice Blado, compact counsel, reported the outcome for summary judgment filed by EnergySolutions in the suit against the Northwest Compact is still pending. The Northwest Compact has filed a joint motion with the state of Utah for summary judgment on counts II and III of the suit. EnergySolutions' response to this motion is due on May 29th.

Southeast Compact Attribution Issue

Mr. Garner reported the Southeast Compact has sent a good letter to its generators emphasizing that generators who export waste must meet all the requirements and rules of the state/compact receiving the waste. Failure to do so could result in loss of access.

Generator Certification Worksheet

Mr. Garner stated a letter was sent to EnergySolutions requesting that they provide a generator certification worksheet for each shipment of incinerator ash shipped to the Clive facility for disposal. EnergySolutions indicated that if it requires substantial resources, it will not be able to provide the worksheet. Mr. Garner reported he is not receiving this data and no longer receives the monthly reports.

It was decided that counsel will draft a letter regarding the certification worksheet, and Mr. Goldstein and Mr. Garner will send a letter addressing the monthly report issue.

Dawn Mining Company Extension Request

Mr. Garner reported that Dawn Mining is requesting a two year extension that would enable the company to continue to dispose of source material from the Midnite Mine in its tailing ponds. Even with the two year extension, only 40% of the originally estimated volume and 33% of the estimated activity would be disposed in the tailings ponds. Mr. Garner drafted a letter to the

Washington State Department of Health indicating the compact had no issue with the requested extension.

Perma-Fix Issues

Mr. McNamara reported that Perma-Fix operates the DSSI facility located in Kingston, Tennessee. The facility consists of a standard boiler that is surrounded by off-gas system to control emissions. The boiler is intended to burn liquids to generate electricity for operation of the facility. It burns radioactive and mixed liquids. The facility has just been permitted to burn TSCA liquids.

The DSSI facility brings material in by drums and consolidates the drums into burn campaigns of 6,500 gallons. Of the 6,500 gallons, about 3,000-3,200 gallons are actual waste and the other 3,000 – 3,500 gallons consists of diesel fuel and water that is used to maintain the BTU level of the burn. Prior to the NW Compact's Clarifying Resolution, the facility had taken some liquids from Canada and this was blended with other materials and run through the boiler. Each burn generates three to five drums of ash waste that prior to the burn were attributed to multiple generators. This burn involving Canadian waste was completed on April 29, 2008, one week prior to the committee's adoption of its Clarifying Resolution. This burn generated five drums of ash.

Mr. McNamara stated that following the adoption of the Clarifying Resolution a letter was sent to Mr. Garner requesting information on a disposition pathway for the five drums, understanding the compact is in the middle of a lawsuit. These drums have been at the DSSI facility for approximately twelve months, but DSSI would like to ship the drums for disposal if possible. Although the state of Tennessee has been cooperative, our license calls for the waste to be moved off-site within twelve months. DSSI would like to ship these five drums to EnergySolutions' Clive facility for disposal.

Mr. Goldstein stated this issue this was discussed in Executive Session, and the committee believes it is best to wait until there is a decision on summary judgment before the committee comments on a disposition pathway for the five drums of waste. Mr. Goldstein thanked Mr. McNamara for choosing to deal in a direct and open manner with the committee on this topic.

Mr. McNamara stated there are areas of uncertainty associated with the resolutions that have been adopted by the committee. In certain cases DSSI gets material from Canada that is used to generate electricity. DSSI can bring these in as materials under a general license, run it through the boiler, and then based on the compact's definitions claim it as DSSI waste.

Mr. McNamara stated it would be helpful if the committee clarified the compact's position on this issue. There are two questions associated with this:

1. Does the compact have authority over materials brought in under a general license for manufacturing, re-use, or energy recovery?
2. Under NRC's attribution rule, would such waste generated as a result of manufacturing, or energy recovery be considered to be a U.S. Waste?

Mr. McNamara explained there are two types of import licenses and two sets of rules under NRC regulations. There are specific licenses for treatment and disposal, and there are general licenses for radioactive materials that will be re-used.

Mr. McNamara stated he understands the committee position regarding foreign waste, but the uncertainty of the extent of the committee's position in this area is creating issues for our operation. Perma-Fix is working on an import license with NRC for Canadian waste that will be processed and returned to Canada. The NRC now wants Perma-Fix to describe what will happen with hepa filters, protective clothing, and anything else that comes in contact with the Canadian waste. There is concern these items would not qualify for access to the Clive facility for disposal under the Clarifying Resolution.

Mr. Garner stated that hepa filters and other materials contaminated during the waste treatment process are normally considered to be the processor's waste. The one exception would be when processing materials are entirely used on one generator's waste stream.

Mr. McNamara stated that 99% of the DSSI business involves liquid wastes used for their BTU content. Once run through the boiler the waste loses its tie to the original generator.

Mr. Sinclair stated that a solution to the attribution issue could be waste codes similar to what is used in RCRA. For example, going into the incinerator there would be a waste code for each generator. The resulting ash would then be given a separate waste code.

Mr. McNamara then reported on that portion of the legacy waste remaining at the Perma-Fix Northwest that was originally received from the Southwest Compact. Perma Fix was having difficulty obtaining a permit to dispose of this waste. Mr. Grondin reported the permit process has changed, but this issue was resolved following the recent Southwest Compact meeting he attended.

Co-mingled waste at EnergySolutions' Bear Creek Facility

Mr. Garner reported that Puget Sound Naval Shipyard waste had been co-mingled with out-of-region waste during the incineration process at EnergySolutions' Bear Creek facility. One of the recommendations forwarded by Phil Gianutsos was to dispose of the co-mingled waste at the Clive facility, and compensate US Ecology of Washington Inc. for the cost had the waste been disposed at the Richland facility. Once compensation was received, Mr. Gianutsos was notified the co-mingled waste could be shipped to the Clive facility for disposal.

Public Comment

None

The committee determined its next meeting will be held next fall in Salt Lake City, Utah.