

Meeting of the Northwest Interstate Compact on  
Low-Level Radioactive Waste Management  
Red Lion Colonial Inn  
Helena, Montana  
October 7, 2010

**Present:**

Russell Takata, Hawaii  
Brian Monson, Idaho  
Roy Kemp, Montana  
Ken Niles, Oregon  
Rusty Lundberg, Utah  
Larry Goldstein, Washington  
Mike Garner, Executive Director  
Kristin Mitchell, Compact Counsel  
Lynn Noah, Compact Staff

Mr. Larry Goldstein, Compact Chair, convened the meeting at 9:00 a.m. Mr. Roy Kemp, Montana's representative, welcomed attendees to Helena. Mr. Goldstein recommended the committee convene to executive session following adjournment of the meeting to discuss legal issues with counsel. The committee unanimously approved this recommendation. The committee approved the minutes from its October 29, 2009 meeting.

**Party State Reports**

**Utah Activities**

Mr. Rusty Lundberg stated he was appointed to replace Mr. Dane Finnerfrock as the new Director of Utah's Division of Radiation Control (Division.) Mr. Lundberg reported working on a number of interstate issues with the member states of the Western Governors' Association.

Mr. Lundberg reported when Governor Huntsman left to serve as the U.S. Ambassador to China, Lieutenant Governor Herbert assumed the role of governor. Under state law, an election will be held in November to elect a governor to serve the remaining two years of Governor Huntsman's term. Governor Herbert has carried forth many of the policies that Governor Huntsman instituted, particularly in terms of agreements with EnergySolutions. If elected in November, it is uncertain if Governor Herbert will make changes to these policies.

Mr. Lundberg stated Utah's legislature has an annual forty-five day session. The Radiation Control and Hazardous Waste programs currently rely on revenue generated by disposal fees. With recent declines in waste volumes, fee revenues are not sufficient to sustain these programs. The last general session examined ways to fix the funding issues as there is a strong commitment in the legislative and executive branches to maintain programs at their current oversight levels. Entering

last year's session, a task force was created to address funding issues. HB 337, passed during the last session, addresses the administrative fees these programs receive.

Mr. Lundberg reported the Division is moving from a volume-based fee to an annual flat fee. The state is currently evaluating the staffing resources required to sustain the low-level radioactive waste (LLRW) program. Utah also has a generator site access program for those using EnergySolutions' disposal services. EnergySolutions also participated in these evaluations and reviews. The discussions also addressed fee changes necessary to fund oversight of hazardous waste disposal.

Mr. Lundberg stated the flat fee will apply to any commercial radioactive waste disposal or treatment facility. For example, Cedar Mountain has submitted a site acceptability application for the development of a new radioactive waste disposal facility in Utah. If licensed, it would be subject to the same fee. The fee change will occur in July 2011 and is done through the administrative fee process. Future fee adjustments will not require legislative approval. The initial fee is projected to be about two million dollars. The bill also addresses the need for the Division to employ qualified personnel to provide reasonable and timely oversight to meet the needs of the Division and industry.

Mr. Lundberg reported that Mr. Steve Creamer, EnergySolutions' CEO and Chairman of the Board, resigned in February 2010 and was replaced by Mr. Val Christensen. In July, EnergySolutions withdrew its NRC license application to import LLRW waste from Italy. In doing so, EnergySolutions stated its business model has changed and will focus on the development of services within the international entities, rather than disposing of foreign LLRW in Utah. The company will focus on providing a wide range of engineering and technical services to facilitate final, in-country disposition of radioactive wastes.

Mr. Lundberg reported EnergySolutions received an initial shipment of 5,400 drums of depleted uranium from the U.S. Department of Energy's (USDOE) Savannah River site. The drums are now in temporary storage in the class A cell area. This week, the Division approved construction and operation of a new building to temporarily store these drums. EnergySolutions is required to develop a performance assessment for the drums in storage as well as any future depleted uranium-type material. The company anticipates submitting the performance assessment by the end of 2010.

Mr. Lundberg discussed the benefit of the Division holding stakeholder meetings to help educate the public on the requirements of a performance assessment, to include how it is formulated and the parameters involved with modeling. The first stakeholder meeting is planned for the beginning of November and final two meetings are scheduled to be completed in advance of submission of the performance assessment.

Mr. Lundberg stated EnergySolutions plans to convert the unused portion of the current 11e2 cell to LLRW disposal. EnergySolutions is in discussions with USDOE regarding eventual ownership and perpetual care of the combined 11(e)2/LLRW cell.

Mr. Lundberg reported the Utah Radiation Control Board (Board) policy statement on LLRW blending was submitted days before the U.S. Nuclear Regulatory Commission (NRC) staff came out with its recommendations in April. The Board has not shown an interest to alter its policy statement following receipt of NRC staff recommendations. The Board looked at two foundational principles when developing its position. First, it agreed that blending doesn't pose any different or unique

health or safety issues than any other LLRW. Second, the Board referenced the statute that prohibits the disposal of class B and C radioactive waste in the state, and stated blending should not be used as a vehicle to circumvent current state law. There are three basic parts to the Board's policy. First, it opposes blending when it alters the waste class for the purpose of disposal access. Second, dilution with clean material is not acceptable. Finally, the Board wants to see fortification of the guidance and regulatory actions to further clarify and refine blending.

Mr. Lundberg stated the performance assessment rule the Division put into place earlier this year was adopted by the Board and made effective on June 1st. The Board is currently examining how to refine the contents of the rule. The Board created a subcommittee to determine when an assessment is required as well as the desired scope of the assessment. It will take its recommendations to the full Board. The Board asked the Division to put out a proposed draft to further refine the performance assessment rule. The Division has received public comment on the rule and this will be used in conjunction with Board input to refine the current performance assessment rule.

Mr. Lundberg reported prior to the legislative session, the Division discussed how to improve its permitting and licensing responsibilities. The Division began conducting a Lean Six Sigma process evaluation in August and is now in the final stages of formulating its recommendations to improve its licensing and permitting processes. This will likely result in the Division reorganizing its functions and programs related to LLRW management and its generator site access program.

#### **Hawaii Activities**

Mr. Russell Takata stated Hawaii has no issues to report at this time.

#### **Oregon Activities**

Mr. Ken Niles reported that Oregon has no LLRW issues to report. Oregon has a term limit of two consecutive terms and as Governor Kulongoski is nearing the end of his second term there will be a new governor following the election. The new governor will enter the next legislative session looking at a budget shortfall of about three billion dollars. As a result, Oregon is likely looking at significant changes in funding and operations.

Mr. Niles reported he had the opportunity to speak on Hanford issues on behalf of Oregon in July 2010 when the Blue Ribbon Commission met in Kennewick, Washington. There were a number of local and regional representatives that also spoke and Mr. Niles was impressed by the breadth of the questions, and the interest taken by commission members to understand the nuances of the issues. Mr. Niles reported Oregon is going to engage more with the transportation and storage subcommittee, as transportation is one of the state's big issues with high-level waste.

Mr. Niles reported he attended a Tri-Cities workshop to discuss the disposition of 46 linear miles of LLRW burial trenches at Hanford. There are 300 LLRW trenches that date back to Hanford's initial days of operation. Originally, it was anticipated these trenches would provide for final disposal, but with the passing of 40-60 years these plans may change. Affected parties are beginning a six-year process, within CERCLA, to evaluate the process knowledge, characterization, data and records, and groundwater data associated with the disposal trenches. Once concluded a final remedy for the LLRW trenches will be selected. Our region has significant interest in the final disposition that is selected.

### **Washington Activities**

Mr. Goldstein reported that due to revenue shortfalls, Governor Gregoire recently required an across the board 6.3% cut in general fund expenditures. There is currently a freeze on out-of-state travel and authorization from the Office of Fiscal Management was required to attend this meeting.

Mr. Goldstein reported that Ms. Diane Hallisy, the site-use permit administrator for many years, is retiring at the end of October. The Washington State Department of Ecology (Ecology) and the Washington State Department of Health (Health) have agreed to transfer this function to Health.

### **Montana Activities**

Mr. Roy Kemp reported that two years ago there was interest in south Montana in in-situ uranium exploration. That interest has subsided and currently there is no activity.

### **Idaho Activities**

Mr. Brian Monson reported that Idaho is experiencing the same budget issues as other states.

### **Wyoming Activities**

Mr. Carl Anderson reported Wyoming will have a new governor following the November election. The state is seeing some pressure with respect to in-situ uranium mining, and legislation has been floated by the mining association to allow for third party review of permit applications. While the proposal was primarily focused on in-situ uranium mining and coal permits, such legislation would impact all permitting programs in the department. Uranium companies are starting to do some aquifer testing that will generate millions of gallons of water with potentially high radium concentrations. To date, there is no plan on how to manage this water, but there is talk of land farming it. Mr. Anderson stated it is not clear how this is an appropriate treatment for radium.

### **Rocky Mountain Compact**

Mr. Leonard Slosky, Executive Director of the Rocky Mountain Compact, reported the Rocky Mountain Compact Board (RMCB) concluded a hearing on International Isotopes, which plans to develop a uranium hexafluoride (depleted uranium) processing facility in New Mexico. The company has an NRC license application pending for its proposed operation. International Isotopes requested an exemption from RMCB's LLRW import permit requirement for importation of uranium hexafluoride. The RMCB decided not to grant the exemption, and instead issued a declaratory order stating that if the company processes the uranium hexafluoride and sells products derived from the processing of uranium hexafluoride, the RMCB would have no jurisdiction over the uranium hexafluoride the company receives.

Mr. Slosky reported the compact will likely begin exporting millions of pounds of depleted uranium in the next few years. The Urenco USA/LES uranium enrichment facility in New Mexico began operation this year. Urenco USA/LES has entered into a contract with International Isotopes to process the uranium hexafluoride generated by the enrichment facility. International Isotopes will extract fluorine gas from the uranium hexafluoride to develop products for sale.

Mr. Slosky reported that under an agreement with the state of New Mexico, the waste streams resulting from uranium enrichment and uranium hexafluoride processing cannot be disposed in the state. Urenco USA/LES's NRC license places a limit on the number of depleted uranium cylinders

that can be stored on-site. Following processing of the uranium hexafluoride, the waste stream will be exported from the compact provided there is a licensed facility that can accept it. International Isotopes is discussing disposal of this waste stream with EnergySolutions. Due to the proximity of the Waste Control Specialists (WCS) disposal facility in Texas, the long-term plan is to send the processed uranium hexafluoride to WCS if the Texas Compact authorizes LLRW imports.

### **US Ecology Washington Activities**

Mr. Mike Ault, Facility Manager, reported the Richland facility received 33,261.99 cubic feet of LLRW, 3192.64 cubic feet of NARM waste, and 244.76 cubic feet of Exempt waste in 2009, for a total of 36,699.38 cubic feet. To date in 2010, the facility has received 12,685.21 cubic feet of LLRW, 2,165.31 cubic feet of NARM waste, 202.39 cubic feet of Exempt waste, for a total of 15,052.91 cubic feet. The company projects it will receive an additional 6500 cubic feet of waste during fourth quarter of 2010. About 99% of the site availability costs, 85% of volume costs, 86% of shipment costs, and 72.7% of the container costs have been recovered. Exposure costs have been over collected by \$42,727 and this will be rebated to generators based on the percentage of exposure paid by individual generators. Any cost categories that are under collected get carried forward into the following year.

Mr. Ault reported the Model Toxics Control Act (MTCA) remedial investigation is completed. The company is working with the Washington State Department of Ecology (Ecology) to finalize the feasibility study. Once completed, Ecology will develop the cleanup action plan.

Mr. Ault stated the company has completed the site prep work for placement of the initial layer of the cover on filled trenches. Certain fences and some buildings have been moved to increase the site's footprint. As some of the early trenches abutted the property line, the company is working with Ecology and USDOE to increase the footprint of the leasehold. Following approval of the cleanup action plan, cover installation will begin

### **Washington Activities Overview**

Mr. Goldstein reported the investigation at the Richland commercial disposal facility started in 2008 is anticipated to be completed by the end of this year. Once the clean-up action plan is approved, Ecology will have eight quarters of vadose zone and groundwater monitoring. Four volatile organics that were contaminants of concern were found in the soil vapor, including trichloroethane and chloroform. Groundwater samples identified four substances that exceeded concentrations for cleanup levels including hexavalent chromium, trichloroethane, chloroform, and arsenic.

Mr. Goldstein reported the draft final remedial investigation report was completed in June, and the draft feasibility study was completed in July. There are some issues with the feasibility study as Ecology staff found inaccurate cleanup levels, inconsistencies between some of the data, tables, and text, and questions about the proposed point of compliance in regards to state regulations. US Ecology is considering paying its subcontractor to correct the errors.

Mr. Goldstein reported both the remedial investigation and feasibility study are subject to public review and comment. Comments will be used to develop a draft cleanup action plan, also subject to public review and comment. The purpose of the action plan is to describe the preferred alternatives

for cleanup, and the specific cleanup levels for all medium. It is hoped this will be completed by the end of the year.

Mr. Goldstein stated the draft final feasibility study alternatives were described for three areas. The areas and alternatives include:

1. Pre-1985 trench area, consisting primarily of the chemical trench, where mixed waste was disposed prior to 1985.
  - No action
  - Use a geo-synthetic enhanced cover, with institutional controls
  - Use a geo-synthetic enhanced cover, and an active or passive solar vapor extraction system
2. Resin Tank Area
  - No action
  - Cover the tanks with institutional controls
  - Remove and dispose of the tanks and the contaminated soils around the tanks
3. Groundwater
  - No action
  - Institutional controls with monitored natural attenuation, such as adding a metals remediation compound to the groundwater
  - Pump and treat with monitored natural attenuation
  - Institutional controls with enhanced monitored natural attenuation

*Note: the underlined alternatives were selected as the preferred alternatives*

Mr. Goldstein reported the groundwater alternative selected will include injection of an organo-sulfur compound to reduce the hexavalent chromium to insoluble trivalent chromium.

Mr. Goldstein stated the cover design described in the 2004 EIS was a geosynthetic cover with a 60 millimeter High Density Polyethylene (HDPE) membrane. The design has been refined and is now described as an evapotranspiration design. As a result of data generated during the investigation, a robust vapor extraction system is included in the final design. The objective was to begin construction in 2009. Because the facility is still under investigation, it is critical that MTCA enabling regulations are followed. The regulations allow that an action can be taken if necessary to reduce the threat to human health and the environment. In this case, the action is to prevent further infiltration that could mobilize hazardous substances. Prior to taking action, MTCA requires development of an Interim Action Plan.

Mr. Goldstein stated that USDOE offered to give US Ecology about 800,000 cubic yards of soil from the Environmental Restoration Disposal Facility to use for its cover. This offered a significant cost savings, but agreement could not be reached on who would pay to haul the soils. Once resolved, contracts are needed between US Ecology, USDOE, and Washington Closure Hanford.

Mr. Goldstein reported Ecology developed a draft Final Interim Action Plan, and Health developed an addendum to the final EIS, as required under the State Environmental Policy Act. These documents took longer than anticipated and were eventually published in April. By July, the agencies realized the chance of completing construction prior to freezing temperatures at Hanford was highly unlikely. The decision was made to postpone construction until 2011.

Mr. Goldstein reported a public meeting was held to present the Interim Action Plan and to hear stakeholder concerns. Then, in late May, Ecology was served with two lawsuits. One was a petition for judicial review under the Administrative Procedures Act where plaintiffs alleged that constructing the lower layer of the cover prior to completion of the investigation would violate MTCA. Plaintiffs also alleged Ecology should not proceed without a supplemental Environmental Impact Statement as doing so would violate multiple federal and state laws. The second motion was to compel production of the administrative record used to guide Ecology's decision to abandon the Interim Remedial Action.

Mr. Goldstein stated Ecology received three Public Disclosure Act records requests in June. One pertained to the cover design, the second pertained to cost, and the last pertained to modeling and dose limits. In July, plaintiffs filed a motion for a temporary restraining order to maintain the status quo at the facility until the court heard and decided the earlier suits.

Mr. Goldstein reported during summer, a number of technical and administrative issues were becoming apparent. The agencies realized the fence line was about two feet away from the legal boundary of the leased land. Construction of the lower layer of the cover would definitely encroach on USDOE land. To address this issue either an easement or a new description of the leasehold would need to be developed. The second option was selected, but the lead DOE real estate agent at Hanford stated this process would take at least six to eight months. As a result of the concerns involving welding of the HDPE liner seams in freezing temperatures and the cost inefficiencies of mobilizing, de-mobilizing, and mobilizing again it was decided that construction will be postponed until next year. A letter was sent on August 6 to stakeholders and plaintiffs informing them of this decision.

Mr. Goldstein reported during the first week of September the plaintiffs filed a motion for preliminary injunction and stay. Then, in the second week of September, a fourth public disclosure request was received. This request pertained to the lease revisions; the decision to postpone cover construction; the use of ERDF soils and; any SEPA evaluation that was conducted regarding the existing haul road and the potential impacts this has on cultural and biological resources. On September 24, a hearing was held on the motion to compel the administrative record, and the court adopted our decision for a proposal that the Agency Record could be produced by the end of October. The court also adopted language in the petitioners' motion that states anything that is not disclosed in the Agency Record at the time of the decision could not be a part of the Agency Record. Mr. Goldstein stated the Agency Record did not exist at the time the decision was made. The next step will occur in October and involves a hearing on the preliminary injunction.

Mr. Lundberg inquired whether the ET cover increased the cost of financial assurance required, due to the amount of post-closure monitoring associated with such a cover. Mr. Goldstein stated it did not.

### **Review of National and Regional Issues**

Mr. Garner stated three responses were developed to requests by organizations to extend the term of their import licenses with NRC.

1. ARVEA sought to extend import license IW024 from the end of 2009 to the end of 2010. This involves a reactor coolant pump used at the DC Cook plant in Michigan that was sent

to France for refurbishment. The compact indicated it had no issue with the requested extension.

2. Duratek, now EnergySolutions' Bear Creek facility, sought a six-year extension to import license IW017 and export license XW010. This will allow the company to continue to import LLRW from Monserco Limited in Canada. Previously, this resulted in Canadian LLRW being re-attributed as the processors LLRW following incineration, as authorized by Tennessee regulators in an amendment to the facility's operating license. This LLRW was then shipped as Tennessee LLRW to the Clive facility for disposal. This situation provided incentive for the Northwest Compact committee to adopt the Resolution Clarifying the Third Amended Resolution and Order. The response to NRC stated the Northwest Compact has no authority over the Clive facility following the ruling of the U.S. District Court of Utah. However, should the U.S. Tenth Circuit Court of Appeals reverse the district court ruling, the Northwest Compact will again have authority over LLRW accepted by the Clive facility. The NRC put this extension request in abeyance until the conclusion of the Declaratory Judgment suit.
3. Diversified Scientific Services Inc. (DSSI), a Perma-Fix subsidiary, sought extensions to import licenses IW004 and IW012. This will allow the company to continue to import contaminated liquid waste from Canadian generators. It was explained to Mr. Paul Hickman, Regional Sales Manager, as a result of the district court ruling the Northwest Compact did not currently have authority over EnergySolutions' Clive facility. However, this could change should the U.S. Tenth Circuit Court of Appeals elects to reverse the district court ruling. Therefore, it was likely the NRC will put these two extension requests into abeyance until the conclusion of the Declaratory Judgment suit. Mr. Hickman pursued a remedy that would allow the company to continue with the extension request. An agreement was reached whereby Mr. Hickman submitted a letter to NRC indicating that DSSI will return the treatment residue of boiler and baghouse ash, as well as the containers used to import and transport the waste to DSSI to the Canadian generators. None of this waste will be disposed in the United States. As a result of this letter, the compact informed the NRC it had no issue with the extension requests.

Mr. Garner referenced a position taken by Mr. Ben Johnson, Chair of the Atlantic Compact, on the importance of proper LLRW attribution in correspondence to the Commissioner of the South Carolina Department of Health and Environmental Control. Within this document, Chair Johnson states:

“As to the second concern raised by Mr. Haynes, regarding the re-manifestation of processed waste, we are aware of published reports that the State of Tennessee may have allowed waste processors to exclude information about the original generators, even foreign generators, when the treatment residue from the waste was re-manifested for shipment to other states. While this is a new and novel approach, we urge DHEC (within the state of South Carolina) to continue the traditional policy of requiring identification of the generators whose waste originally contributed to the packages received for disposal at the Barnwell site. This information is necessary for billing, accounting, and liability purposes, and of course since July 1, 2008 this information is necessary to determine whether the package contains exclusively regional waste and is thus eligible for disposal at Barnwell at all.”

Mr. Garner pointed out this position is consistent with the position the committee has taken and is necessary to effectively oversee a compact's exclusionary authority.

Mr. Garner reported the House of Representatives passed the Radioactive Import Deterrence Act on December 2, 2009 by a vote of 309 in favor of, to 112 against. The bill has not yet moved to a vote in the Senate.

Mr. Garner stated in a July 14, 2010 press release Mr. Val Christensen, President and CEO of EnergySolutions, announced the company was pursuing a new international business strategy that does not include disposal of internationally generated LLRW in Utah. Mr. Christensen stated the company can best serve its international customers by exporting its skills and technologies and building long-term relationships to assist in the development of their own facilities and capabilities. On July 23, 2010, EnergySolutions sent a letter to NRC withdrawing its license application to import 20,000 tons of Italian LLRW. At the September 2010 RadWaste Summit meeting, Mr. Christensen stated EnergySolutions' will focus efforts on developing trust within the public sector. This will include efforts to educate the general public on disposal practices at the Clive facility.

Mr. Garner reported the NRC held a meeting on October 7, 2009 seeking input on the impact to hospital and university operations resulting from a lack of waste disposal access. At this meeting a representative from an institution within the Northwest Compact voiced some concerns. The individual stated Northwest Compact generators were not allowed to dispose of their waste at Energy Solutions, a cheaper option than the Richland facility. The individual also stated compact generators could not send their LLRW to EnergySolutions' Bear Creek facility.

Mr. Garner stated responses to these comments were developed and provided to the NRC. The responses included:

1. All regional generators, including Rocky Mountain Compact generators, are provided assured access for disposal of Class A, B and C low-level waste. There is no access issue in the Northwest Compact.
2. US Ecology's operation of the Richland facility is considered to be a monopoly by Washington State and its disposal rates are regulated by the Washington Utilities and Transportation Commission. Under this system the company is authorized to receive an annual revenue requirement. To ensure the lowest possible disposal rates are maintained for regional generators, it is necessary that all regional generators use the Richland facility.
3. An agreement is in place whereby the Bear Creek facility will process Northwest Compact LLRW. The LLRW will be stockpiled until a sufficient quantity is accumulated to warrant a dedicated incinerator campaign. Once incinerated, the ash is attributed to the original generators and shipped to the Richland, Washington facility for disposal.

Mr. Garner reported that Mr. Phil Gianutsos with EnergySolutions' Bear Creek facility reported contamination was identified following a dedicated run of Northwest Compact generator's LLRW. In a letter to Health, Mr. Gianutsos explained the Bear Creek facility followed all the procedures put in place following a previous cross-contamination issue. The issue was discussed with representatives of Health, and it was agreed the incineration ash should be shipped to the Richland Washington facility for disposal.

Mr. Garner reported he was invited to make a presentation at the September 2010 RadWaste Summit meeting in Las Vegas. The presentation addressed the following issues:

- The impact of the U.S. Tenth Circuit Court of Appeals ruling on the appeal of the U.S. District Court ruling in EnergySolutions Declaratory Judgment suit.
  - Impacts should EnergySolutions prevail
  - Impacts should the Northwest Compact prevail
- The importance of the Low-Level Radioactive Waste Policy Act to states currently hosting operating disposal facilities and future site development.
- How public perception impacts operating disposal facilities as well as future site development.
  - The public must have confidence facilities are being operated in a manner consistent with the original intent of the facility.

Mr. Garner stated comments regarding LLRW blending were submitted to the NRC on January 29, 2010. The comments included the following:

- The closure of the Barnwell facility to out-of-region LLRW should not be used as a reason to consider LLRW blending. Instead, lack of access should provide incentive for future site development.
- NRC should ensure its decision does not compromise an interstate compact's ability to effectively regulate its exclusionary authority. This could occur should NRC allow re-attribution of LLRW following blending.
- Blending could result in disposal facilities accepting LLRW their license does not authorize. The Clive, Utah facility is licensed by the state of Utah to accept class A waste. Following the blending of Class A LLRW with either Class B or/and Class C could also be shipped to the Clive facility, contrary to the intent of the license.
- Finally, NRC should ensure its decision will maintain or improve the public's confidence in the management of LLRW.

NRC staff offered the following four options to Commissioners regarding blending:

1. Maintain NRC's current position of blending of homogenous waste streams. Authorized blending would continue to be covered by NRC's Branch Technical Paper, which would be updated. This would not be risk-informed and performance based as desired by NRC.
2. Revise blending positions to be risk-informed and performance based. This would require site specific assessments and would eliminate the factor of ten rule for mixing of LLRW that can be blended into a homogenous mixture.
3. Revise agency blending policy to further constrain blending. Classification would be required prior to the blending of waste rather than when the waste is prepared for disposal. Therefore, the blended material would be subject to the same disposal regulations as prior to blending.
4. Prohibit large scale blending at off-site processors. This practice could be viewed as a method to intentionally lower the waste classification.

NRC staff recommended the second option be adopted as this is risk-informed and performance based. Staff also recommended that large scale blending be included as part of its "unique waste stream" rulemaking. It is anticipated that Commissioners will decide on a blending option within the next month.

Mr. Garner reported the Conference of Radiation Control Program Directors (CRCPD) adopted a resolution stating recent events highlight the vulnerability of U.S. medical community to interruptions in the supply of short half-life medical isotopes for which there is currently no domestic source of production. State licensing programs may be reluctant to license these sources or new production facilities in light of the absence of practical disposal options. Barnwell's closure to out-of-region LLRW has eliminated disposal options for many states within the country. CRCPD encourages support for the federal process developing Greater Than Class C (GTCC) disposal options.

Mr. Garner reported receiving a letter from Ms. Ruth McBurney, Executive Director of the CRCPD. The letter reiterates the request for an access arrangement, similar to the request received by the committee at its October 2009 meeting. The letter explains CRCPD is in position to collect 3,400 cesium-137 sources containing sixteen curies and about 390 Strontium 90 sources containing 8.1 curies. These sources can be packaged for disposal in five waste drums. Mr. Garner stated his response explained an arrangement would have to be adopted by the Northwest Compact committee before access is provided to the region for disposal of the sources at the Richland disposal facility. Currently, under Washington State law, the Washington representative may only vote in favor of arrangements that involves a state contiguous with a member state of the Northwest Compact and generates less than 1,000 cubic feet of LLW per year. Therefore, Washington State law would have to be changed to enable the state's compact representative to vote for such an arrangement.

Mr. Garner reported the Nuclear Government Coordinating Council and Nuclear Sector Coordinating Council created the Removal and Disposition of Disused Sources (RDDS) Focus Group in February 2009. Its mission is to ensure that disused sources do not fall into hands of terrorists for use in the manufacture of a dirty bomb. The contamination that would result from a dirty bomb is potentially enormous. The RDDS process included adoption of a Part 1 and Part 2 deliverable. Mr. Garner stated his participation was limited to the submission of comments and participation on a conference call shortly before the adoption of the part 2 deliverable. The comments included:

- What is being done to address the perpetuation of this issue?
- States or interstate compacts lacking disposal access could develop secure storage capacity for such sources. If spent nuclear fuel can be safely stored why can't sources be safely stored? This recommendation was rejected as the focus was on permanent disposition. The concern is that such storage would not be as secure as that provided by a nuclear utility.
- In those states that have disposal access, ship the sources directly to the disposal facilities instead of collecting these sources. RDDS could subsidize disposal but this would eliminate the unnecessary transport. It appears RDDS will take this direction.

Mr. Garner stated he explained to the RDDS and CRCPD groups that under Washington State regulations, if a hundred sources are collected from a hundred organizations within the compact then a hundred site-use permits are required. Otherwise, generators with a disused source are going to want these organizations to take their sources, which will significantly impact the revenue generated through the issuance of site-use permits by Ecology. This revenue funds the compact and site-use permit administration activities. It appears these groups now recognize the importance of this requirement.

The RDDS Part 2 deliverable also indicated that if disposal options cannot be found within a year the group will go to Congress to attempt to get changes to current law governing LLRW management. During the conference call Mr. Garner stated if this is the case then the group should go to Congress now as there is no way the law in Washington State will be changed in that time frame. The time frame for approaching Congress was changed to three years.

The RDDS Part 2 deliverable supports:

- U.S. Department of Energy's efforts to license a GTCC disposal facility.
- Increasing the container size over which concentration averaging can occur. Currently limited to 55 gallon drums
- Focus on seeking case by case exemptions from existing compacts for disposal of discreet numbers of high risk sealed sources.
- Physical destruction of class A sealed sources to gain disposal access

Mr. Slosky stated he initially participated in conference calls held by the RDDS Focus Group but then dropped out. Within the Rocky Mountain Compact region, sources have been removed in violation of the RNCB export permit requirements. One source removed from Colorado was of no risk to national security. The RDDS group approached the LLW Forum at its Fall 2010 meeting and asked if the Forum could establish a working group to provide recommendations on this issue. The Forum determined a steering group will participate in a workshop in January 2011 to identify if formation of a working group is warranted.

Mr. Niles asked if in the last two years states outside the compact had approached the Rocky Mountain or Northwest Compact about joining either compact. Mr. Garner stated that unlike the early 1990's the compact has not received any inquiries recently.

### **AREVA's Eagle Rock, Idaho Uranium Enrichment Facility**

Mr. Bob Poyser, VP AREVA Enrichment Services - Idaho regional area, stated AREVA plans to build a \$2.5 billion state-of-the-art uranium enrichment facility near Idaho Falls, Idaho. The facility is located on about 4000 acres, west of Idaho Falls on US Highway 20. The plant will be constructed in a manner that allows its capacity to be doubled and should this occur, the investment could reach \$4.1 billion. Construction of the facility will employ 580 to 1,000 workers. Once started, operation of the facility will employ 250 to 400 workers. The regional impact of the operation on indirect jobs affected in the Idaho Falls area is estimated to be 3,000 to 5,000. It is a substantial project and the company has received a lot of encouragement from the community, region and the state of Idaho.

Mr. Poyser stated the enrichment portion of the nuclear fuel cycle uses only natural uranium in the process. Natural uranium contains about 0.7 percent U-235. Yellowcake is developed from the mining process and then goes to a conversion facility where it is turned into a crystalline material. This material is placed into 48Y cylinders that weigh 32,000 pounds when ninety percent full. The cylinders are then shipped to the enrichment facility where the U-235 is enriched to 5%, AREVA's license limit. The enriched U-235 is shipped in cylinders to fuel fabrication and fuel assembly facilities, such as AREVA's Richland facility.

Mr. Poyser stated Urenco holds the patent on the TC 12 centrifuges that will be used at the AREVA facility. These centrifuges are twelve to fourteen inches in diameter. Once a feed cylinder is connected to the centrifuge cascades at the enrichment facility, it is a closed system containing a very low concentration of uranium. AREVA's enrichment facility may contain as many as 10,000 centrifuges. The centrifuge cascades are separated into groups so if one group goes down, the others keep operating. The centrifuges are designed to operate for 30 years and once started they never stop spinning. There can be no loss of power because if the centrifuge cascades are not shut down in an orderly fashion the uranium gas solidifies and it can be a real issue getting them started again. The Eagle Rock plant will have two independent sources of on-line power, one from the east and one from the west, supplying the 69 megawatts of power for the operation. There will be generator backup to help shut down the system in an orderly fashion in case of an emergency. Once it is spun in a series of centrifuges, there are two streams that come off, which are cooled and solidified back into depleted uranium and enriched uranium. The 48Y containers are re-used and filled with the depleted uranium.

Mr. Poyser stated similar plants are found in Germany, Great Britain, France, Netherlands, and New Mexico. Three have been operating for 30 years, so the technology is proven. The Idaho facility will produce 3.3 million separative work units (SWU), which is a measure of the effort required to produce a given amount of enriched uranium. The facility will be licensed for 6.6 million SWU, allowing AREVA to double the capacity in the future. AREVA anticipates construction will start next year on 48 centrifuge cascades in two separation modules. AREVA hopes to have the first centrifuge cascade online by the first quarter of 2014.

Mr. Poyser stated the facility will consume about the same amount of water as a single center pivot irrigation system uses during growing season. HVAC will be used for cooling. The plant will not generate much waste and a key to the facility is the waste generated will be moved off-site. Depleted uranium will comprise the largest waste stream. AREVA operations have a 30 year life, but the license can be extended like any NRC license.

Mr. Garner asked about the disposition of the LLRW and depleted uranium generated by the facility. Mr. Poyser stated LLRW will be shipped to the Richland disposal facility operated by US Ecology and the depleted uranium will be turned over to the U.S. Department of Energy. Under its license, AREVA has committed to pay the USDOE to take the depleted uranium off-site and out-of-state for deconversion. Mr. Poyser stated USDOE just opened a new deconversion facility and is uncertain of the status of a second facility planned by USDOE.

Mr. Niles asked if the project is a 100% go at this time. Mr. Poyser indicated it is a 90% go as there are several items that have not been completed. Until these are completed, it is not for certain.

### **Committee Business**

Mike Garner stated the committee has received a request from CRCPD to consider an arrangement to provide access for disposal of disused sources the group has identified. A similar request is anticipated from the RDDS Focus Group. Mr. Garner asked committee members to consider whether they favor the pursuit of such an arrangement during the coming months.

Mr. Garner stated there are pros and cons to a potential arrangement. For example, why should sited compacts carry the burden for those states and compacts that have failed to meet the requirements of the Low-Level Radioactive Waste Policy Amendments Act after twenty-five years? On the other hand prevention is much easier than dealing with the contaminated debris that would result from an event, and this would benefit the United States. Mr. Garner stated cleanup associated with a dirty bomb event could involve 2-4 million tons of contaminated debris. Mr. Goldstein has previously stated Washington would assist with the cleanup should there be a dirty bomb event.

Mr. Garner stated should the committee determine it favors pursuing an arrangement there would be much work to be done. Ecology will need to identify if the legislature is willing to amend Washington State law to enable the Washington representative to vote for such an arrangement. Ecology will need to identify the position that citizens and environmental groups within the state of Washington will take on a potential arrangement.

Mr. Monson stated the compact currently accepts LLRW from twenty-two percent of the nations' states. It appears the compact is doing its fair share, and this is consistent with the position the state of Idaho has taken with U.S. Department of Energy Waste streams.

Mr. Niles stated when there is an identified problem he is open to the compact being part of the solution with certain caveats. The compact needs more information on this issue. For example would the Atlantic and Texas Compacts be open to also accepting sources, making the compact's acceptance of a portion of these sources more equitable. In moving forward the compact must continue to protect its exclusionary authority, but if a multi-region solution could be reached, it seems this is something the compact should consider.

Mr. Kemp stated the CRCPD program has been very helpful with the recovery of orphaned sources in the state of Montana. Mr. Kemp agreed with Mr. Niles' recommended approach.

Mr. Takata stated he is familiar with the benefits afforded by CRCPD's sealed source recovery program. There is an issue here, and it may be just the tip of the iceberg, but it would be foolhardy to ignore it. It appears a multi-regional approach would be a reasonable start but this issue also needs additional emphasis on the federal level.

Mr. Lundberg concurred that the concept of linking with others and sharing this burden is of more value.

### **Compact Counsel – Overview of Legal Issues**

Ms. Kristen Mitchell, filling in for Ms. Alice Blado, stated she is watching the litigation on the US Ecology site closure plans, in terms of legal issues that the compact might face.

Ms. Mitchell reported the Supreme Court issued a ruling in the Southeast Compact and Alabama versus North Carolina case. A year ago the Northwest Compact voted to join an amicus brief, led by the Rocky Mountain Compact, expressing the concerns of interstate compacts. This case focused on North Carolina's failure to follow through with commitments to license and develop a disposal facility within the Southeast Compact, and North Carolina's eventual departure from the

compact. The Southeast Compact sued to recover some of the funds it had contributed to North Carolina for the site development process. Initially, the Supreme Court said it would not take this case as it is a compact case and normally the Court only take cases between states. The case then came back with member states of the Southeast Compact joining the compact at which point the Supreme Court agreed to hear the issue. There is widespread interest in this case as it has ramifications beyond the low-level radioactive waste community.

Ms. Mitchell stated if a compact's statutes do not explicitly address the sanctions, such as imposition of a monetary fine, it is unlikely the compact will get anything implied from the court. In this case, the sanctions written into the compact were the authority to restrict privileges of a member state, or a member state may be dismissed from the compact. The statutes did not address a mechanism for the return of compact funds used in the site development process. This should cause compacts to think very carefully about entering arrangements with other states.

Ms. Mitchell reported the Supreme Court stated it would not give deference to a compact on what the compact language means. Normally, state and federal agencies get a fair amount of back-up from courts concerning the language of their statutes or contracts. Compacts are not receiving the same deference. Another interesting point is the court declined to rule on some of the contract dispute issues, such as can you get an equitable remedy – promissory estoppels. This case could go further and it will be interesting to see if the Southeast Compact and its member states decide to take up those issues that were left off. For example, out of pure fairness, can the compact argue that it deserves to have some of the funds it invested in the process returned? The ruling came out June 1, 2010, and there has not been any legal maneuver to move this case again through the Supreme Court on the fairness issues.

Mr. Slosky stated Southeast Compact has decided to further pursue these legal issues.

Ms. Mitchell stated the Energy Solutions' oral arguments were heard on January 14, 2010. It is uncertain when the U.S. Tenth Circuit Court of Appeals will issue its decision.

### **Public Comment**

No public comment was received.

Committee members discussed possible locations for its next meeting. Wyoming was identified as an option, but this could change as a result of the budget issues facing Washington State.

The meeting was adjourned and committee members entered into executive session.