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MINUTES

St. Louis Site Remediation Task Force
Alternative Sites Working Group

January 25, 1996 Meeting

APPROVED

Hazelwood Civic Center East
Hazelwood, Missouri

Participants Attending

Tom Binz, Laclede Gas
Kay Drey
Jack Frauenhoffer, Mallinckrodt Chemical
Larry Erickson, MDNR
Tom Horgan, U.S. Rep. Talent's Office
Eileen O'Connor, Union Electric
Sally Price, chair

Support

Jim Dwyer, Facilitator

Dave Miller, SAIC
Sarah Snyder, FUSRAP

Other Interested Parties

Chuck Blumenfeld, Bogle & Gates, for Dawn Mining Co.
Jeff Comer, SAIC
Bill Futrell, Bechtel
Tjaden Meyer, R.M. Wester & Associates
Al Rafati, Director of Business Development for Envirocare of Utah, Inc.

Agenda Item	Minutes	Determination
Call to Order	Jim Dwyer called the meeting to order at 9:43 a.m. He then introduced Al Rafati from Envirocare.	
Envirocare Presentation	Mr. Rafati said he would start his presentation with a discussion about how waste is brought to Envirocare and how it is placed in the disposal cell. Envirocare is located about 80-85 miles west of Salt Lake City. It is about 40 miles from any community, so meets a general criterion of not being near a populated area. The facility occupies about 640 acres.	

He provided some statistics about the site:

- 4.8 inches average annual precipitation
- 60 inches average annual evaporation
- low permeability clay soils
- stagnant, non-potable groundwater
- desert scrub brush community
- 40 miles from nearest population
- isolated in 100 mile square hazardous waste zone

Mr. Rafati said the Utah Legislature created the hazardous waste zone exclusively for hazardous industries. Tooele County is home to a U.S. Army Depot that is the largest repository for chemical weapons. The zone also has two incinerators, as well as a hazardous materials disposal site.

Groundwater is about 650 feet beneath the surface. There are some lenses of water, though not potable. Envirocare has installed monitoring wells in the first lens (about 50 feet down). However, Mr. Rafati said that lens is only about 6-18 inches thick and moves about half a foot a year.

Envirocare was licensed in 1988. In 1986, it was the disposal site for tailings from the Vitro facility in downtown Salt Lake City. After the Vitro work, the decision was made to license a disposal facility in western Utah, and that facility became Envirocare.

Mr. Rafati said the Vitro site involved about 2.5 million cubic yards of radioactive material, with concentrations about 10 times that of the St. Louis Site materials. The Vitro material is monitored by the state.

Envirocare also receives NORM (naturally occurring radioactive material) at the facility. EPA has designated Envirocare as the

disposal site for NORM material from a Superfund site in Denver. Envirocare also has a hazardous materials cell for Resource Conservation and Recovery Act (RCRA) and mixed wastes.

Kay Drey asked about community acceptance of the facility.

Mr. Rafati said the immediate community is Tooele County, which has accepted Envirocare. He said the state legislators from the area also are supportive.

He explained that the cell built to hold 11(e)2 material is only about one year old; Envirocare received its 11(e)2 license in 1993. In addition to FUSRAP waste, this cell receives material from the Kerr-McGee site in West Chicago.

Although Envirocare can handle intermodal containers, Mr. Rafati said the preferred method of shipping is by rail. Envirocare has a roll-over facility that turns over gondola cars and dumps the material in a concrete-lined area where it is then loaded into trucks and taken to the disposal cell. The rail cars then are decontaminated in a washing facility and released. The rinse water is evaporated.

Mr. Rafati said more than 13 regulatory agencies oversee all aspects of Envirocare operations, including the NRC, EPA, and various state agencies. Typically, there is a state inspector on site about four days of each week.

He said that Envirocare also has received material from a site in Apollo, Pennsylvania. That site was one of the first to be remediated under the NRC's decommissioning management plan.

Envirocare's has also contracted for one turn key operation at the FUSRAP site in Wayne, New Jersey.

In response to questions about transportation, Mr. Rafati said Envirocare requires gondola cars to have fiberglass caps, although FUSRAP waste is typically shipped in "burrito bags" that are fastened to secure the wastes in transit. If intermodals are used, usually only three intermodals are put on a flat bed rail car. In general, gondola cars are a less expensive way to ship waste, he added.

Mr. Rafati said waste material has to meet moisture requirements and that wastes that are too wet are dried, while wastes that are too dry (and likely to become airborne) are sprayed. Sprayers are located around the roll-over facility, he said.

Ms. Drey asked how long it takes to move waste from the roll-over facility to the cell.

Mr. Rafati said the facility can sustain a rate of 100 to 150 rail cars a day on double shift.

Mr. Frauenhoffer asked about the air monitoring stations at the facility.

Mr. Rafati said there are more than 200 monitoring stations around the site, adding that the most heavily monitored area is the roll-over facility. Workers wear protective equipment, depending on their particular tasks. For example, workers in enclosed vehicles wear half mask respirators, while other workers will wear full mask respirators.

Once material arrives at the facility, there is a very elaborate "fingerprinting" process to

make sure that the material is what it should be. Mr. Rafati said samples of the waste are taken and processed in an on-site lab. Some samples are sent to an outside lab for independent verification.

In explaining how the 11(e)2 cell was built, Mr. Rafati said the cell was excavated about 8 feet into the ground. Then two feet of compacted, low permeable clay in six inch layers was put back as a liner.

He said the waste is put into the cell in 12-inch layers. The containers are not placed in the cell and bags containing waste are shredded and blended with the soil. Then the waste is compacted with earth-moving equipment using rollers. The facility is required to achieve 95 percent compaction in the cell to minimize the chance of wastes settling and causing cracks in the cell. Waste material that is too large is broken up.

Then there is eight feet of clay and two feet of rock put on top of the cell.

Mr. Rafati said there also is a leachate collection system to collect any rain water from the cell. Rain water runs down the sides into the collection area, where it evaporates. If rain gets into the cell when waste is being emplaced, the water either is left to evaporate or pumped out. Then the cell is tested to make sure that no water has infiltrated.

Mr. Rafati said the total curie count at the site two years ago was about 100 curies. He said he would find out the current curie count.

Tom Binz asked what was done to meet daily cap and cover requirements. Mr. Rafati said that they spray a binding substance on

top of the waste to keep it from becoming airborne. If there is air movement as they are placing waste, they also will spray the binder.

Ms. Drey asked how frequently air monitors are read. Mr. Rafati said some are read quarterly, while others are read on a monthly basis. Mr. Dwyer said it would be helpful to have a map of the monitoring station locations.

Mr. Rafati said that, in addition to signage and fencing, there are 24-hour guards and electronic surveillance to make sure no one trespasses at the facility.

He said that the waste acceptance criteria for the facility allow an average, per shipment, of 2000 picocuries per gram for uranium and radium and an average of 6000 picocuries per gram for thorium. He said the facility should be able to accept the hottest material from St. Louis within those limits.

Mr. Rafati also said there are several seasonal constraints. If it is cold, the waste freezes. Generally, between January and March, it is too cold to emplace waste.

Ms. Price asked whether the materials at the St. Louis Site would meet the moisture requirements at Envirocare. Bill Futrell said the responsibility for drying the material is at the source. If the material is too wet, it will be dried before shipment to Envirocare.

Mr. Rafati said that sometimes waste compacts in the rail car on the trip to Envirocare and water comes to the top. Sometimes Envirocare will put a layer of absorbent on water, although that adds to the cost.

Ms. Drey asked if Envirocare has had any waste shipped there from a site in a flood plain. Mr. Rafati replied that they have received waste from a site in Louisiana that is in a flood plain.

Envirocare has a capacity of 14 million cubic yards. There is a trust fund to cover costs of closing the facility and monitoring it in perpetuity. The trust fund is controlled by the state and the amount in it is reviewed annually, Mr. Rafati explained.

The meeting adjourned at 11:39 a.m.

Approved April 23, 1996

Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri

U.S. Department of Energy