SOCIETY RADIO OPERATORS
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Mike Shy

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SRO Holiday Party
Hibachi Grill Buffet
101 Busse Rd, Elk Grove Village, IL 60007
Wed Dec 14th - 6:30 PM

All SRO members are welcome to the Hibachi Grill Buffet. A highly-rated restaurant has been selected for us to get together for the holidays. Members may bring a guest. The only cost will be non-alcoholic beverages which will be only $2.00.

Mike Shy

SRO Notes for October 13, 2016 (Or: A Sprinkle of Basalt)

By Jim Hawes AA9DT

TONIGHT'S MEETING opens as President Mike Leibovitz WA9EVF, lacking a gavel, slams his mouse on a table. After the cloud of micro-miniature optoelectronics dies down, the meeting commences.

TREASURER'S REPORT. We're solvent! Next time, treasurer Mike Brost WA9FTS will present details. PARTY. We'll hold our Hanukkah and Christmas party at Hibachi Grill Buffet in Elk Grove Village.

TONIGHT'S PROGRAM. Mike Leibovitz WA9EVF presents a slide talk about his summer trip to North Dakota and Idaho. At Teddy Roosevelt National Park, North Dakota, Mike achieved his first vacation goal: In just one hour, he completed 50 contacts with 48 people.

NEXT STOP: IDAHO. In 1951, Arco, Idaho became the first city that atomic power illuminated. This event took place on July 17, 1955. The name of the reactor that supplied Arco's power was the BORAX III. Yet this wasn't the first nuclear reactor in the vicinity of Arco. The original reactor isn't far away. Mike and Cathy visited EBR-1, the 1950 reactor that laid the groundwork for Borax III.

EBR-1 HISTORY. EBR-1 stands for "Experimental Breeder Reactor #1." This reactor resides at Atomic City, an 18-mile drive southeast of Arco. The eminent nuclear physicist Walter Zinn provided the general design for EBR-1. With components from Argonne Labs in Chicago, Bechtel built the EBR-1 facility. The reactor went live on December 20, 1951. In the first test, the experimental reactor lit four, 200-watt light bulbs. The day after the successful test, the EBR-1 powered lights for the entire reactor building. Yet not all tests produced favorable results. Due to an operator error, EBR-1 partially melted down on November 29, 1955. At the time, the government kept the meltdown secret. After repairs, the reactor remained online until December 1963. The EBR-1 reactor site became a national museum in 1966.

TECHNICAL BACKGROUND. Like other breeder reactors, the EBR-1 made, or "bred" more fuel than it consumed. Between 1951 and 1964, the EBR-1 used the first sodium / potassium (NaK) metal coolant. The reactor powered a 2 kW steam turbine generator. The necessary heat for this electric output was 1.4 megawatts. The boiler melted the "NaK" reactor coolant.

IDAHO NATIONAL LABORATORY. After their EBR-1 adventure, Mike and Cathy traveled to Idaho Falls, a town of twenty thousand people. Idaho Falls is about 64 miles from Arco. At the Idaho National Laboratory in Idaho Falls, Mike and Cathy inspected nuclear-power aircraft engines. The air force never mounted the engines on actual planes. A fascinating nuclear train moved engines to their test location.

CRATERS OF THE MOON National Monument is in Salmon, ID. The park is 40 miles from Arco. At Craters of the Moon, a fissure 70 miles long released lava onto the earth. The dried lava is porous, like a bee's nest. But this nest has a sting: The lava is sharp. Basalt rock has edges like glass shards. A hiker must watch his step.

CAVING. Mike and Cathy are amateur spelunkers. Inside one grotto, the ceiling arched 30 feet overhead. Later, daredevil that he is, Mike wriggled down into a mysterious lava tube. Fortunately, a prolonged vertical drop didn't do him in. In fact, he survived until the end of this column. You can reach him with ground penetrating ULF waves, 300 to 3,000 Hz. Use a horizontally polarized loop antenna.

President's Message

Fall is here, most of the leaves have fallen. How do I know? I just packed up my Blaze Orange clothing, took my Remington 860 Express out to the field for testing , was happy with the results and I am preparing to put it up in a tree at 20' to see what kind of DX I can get with it. I will have the answer before this gets published but you will have to wait till the next meeting. Speaking about the next meeting...

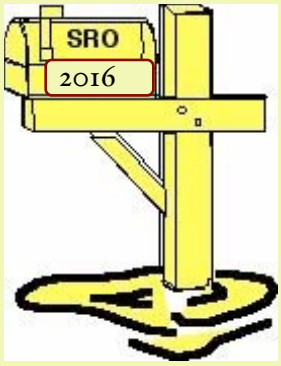
The next meeting will be our annual Holiday Party on Wednesday December 14th. The location will be Hibachi Grill, 101 Busse Road, Elk Grove Village. The club will pop for the buffet dinner, but drinks will cost you $2. Time 6:30 PM.

Till then Happy DXing.

Meeting Attendance

Oct 13th -

Mike WA9FTS	Roger W9DEK
Wanda KC9LRZ	Stan NK9A
George W9GFH	Jim AA9DT
Pete WV9P	Mike WA9EVF



If you move, let the Editor know your new mailing and email addresses. It is our way of getting Mike Shy to you each time.

CFMC Upcoming Regular Meetings - 16th District Police Station
5151 N Milwaukee Av, Chicago - Wed Dec 28th 7:30PM

Foxhunt Report

CFAR 2M Foxhunt - Nov 5th, 2016 by Mike WA9FTS

Don W9RA started the 4 hunt teams off with a good signal to the NW. Could it be Pilot Pete's? Kevin's team split up as two teams with Kevin and Mason in one vehicle and Sheryl in a second driving and Abbey turning the beam. The youngest participant, Grayson (14 mo) was along for the ride. Matt, with readings from Patty, took off north on 83 to 290 and then west on 390. Matt mentioned Gary Av but we went to Lake St and back to Gary and south and west past a Meier gas station. We spotted Don's truck and parked. We had company! The KC9ZLS team had followed us from the start and were getting out. The hunters tool off down Thorn Rd. Running also down the road, I had a slightly left direction but considered it a bad reading. Matt headed west across Thorn and into the woods to find a chair and wondered why it was there. He turned around to find Don for the win. Sheryl's group arrived quickly for 2nd as I was just to the south and spotted 3 large tv set that were dumped in the woods. I found Don also with Matt coming back with Mac to get a picture with Don. A few minuted later Janet arrived with John who secured 3rd. Finally Kevin and Mason arrive to end the hunt. We headed over to Pilot Pete's. Results:

1. Matt KC9SEM, Patty N9PLS, Mike WA9FTS, Jacob, Mac
2. Abbey KD9BLP, Sheryl KC9ZLS, Sonja, Becky, Sandy, Grayson
3. John WD9EXW, Janet
4. Kevin N9JPG, Mason

Experimental Breeder Reactor-I

The Experimental Breeder Reactor-I (EBR-I) is a Registered National Historic Landmark located at Idaho National Laboratory (INL) off U.S. Highway 20/26. EBR-I is maintained for visitors by Battelle Energy Alliance (BEA) for the U.S. Department of Energy (DOE). While its laboratories continue to generate scientific and technological discoveries and engineer new energy sources, DOE has a responsibility to preserve key elements of the history that it has helped create. EBR-I is a part of that history.

Experimental Breeder Reactor-I made history when on Dec. 20, 1951, it produced usable amounts of electricity from nuclear power for the first time. It is now a National Historic Landmark where visitors can see early nuclear reactors.

Visit This National Historic Landmark

In 2011, INL celebrated EBR-I's 60th anniversary. The facility is open to the public seven days a week from the Memorial Day weekend through Labor Day from 9 a.m. to 5 p.m. Visitors can see nuclear reactors and related historic displays and learn about current INL projects. Through the off-season, EBR-I is available for groups on an advance request basis only. Group visits may be arranged by contacting the INL Tour Group at (208) 526-0050, or from the Request a Tour link at www.inl.gov.

Installing the Mark IV Core into the EBR-I reactor vessel.

History

The idea for a breeder reactor (a reactor that could produce more fuel than it uses) first occurred to scientists working on the nation's wartime atomic program in the early 1940s.

Experimental evidence indicated that the breeding of nuclear fuel was possible in a properly designed reactor, but time and resources were not then available to pursue the idea.

After World War II, the newly established Atomic Energy Commission (now the Department of Energy) assigned some of the nation's nuclear skills and resources to developing peaceful uses of the atom. The large bodies of uranium ore found in the 1950s were unknown then, and, since uranium was in very short supply, it was decided that the first power reactor would attempt to prove the theory of fuel breeding.

EBR-I construction began in 1949 at the National Reactor Testing Station in Idaho, now called Idaho National Laboratory. Early in 1951, a few months before the EBR-I building was completed, nine staff members from the Atomic Energy Commission's Argonne National Laboratory arrived on the scene to install the reactor, which they had designed at their lab near Chicago.

The first attempt to operate the new reactor, in May of that year, was not successful. It was determined that there was not enough fuel in the core. Acquiring additional uranium and fabricating slightly larger fuel rods took nearly three months. Then on Aug. 24, Walter Zinn and his Argonne staff brought EBR-I to criticality (a controlled, self-sustaining chain reaction) with a core about the size of a football. Four months of low-power operation followed while the operators studied their new creation.

On Dec. 20, 1951, the first historic experiment at EBR-I began. The reactor was started up and the power gradually increased over several hours. At 1:50 p.m., the first usable amount of electricity ever generated from nuclear power began flowing from the turbine generator. Four light bulbs glowed brightly to inaugurate the birth of nuclear-generated power. The next day, the experiment was repeated, and sufficient electricity to power the EBR-I building was generated.

EBR-I's real mission was not to show that electricity could be generated by a nuclear reactor — scientists already knew that a reactor was a kind of furnace. Splitting atoms inside the core produces heat. Heat can be used to turn water into steam, to drive a turbine and generate electricity, just as a coal or oil-fired electrical plant does. Therefore, EBR-I's chief task was to determine whether scientists' theoretical calculations on fuel breeding could actually be achieved — that more nuclear fuel could be created in a reactor than was consumed during operation.

Less than a year after EBR-I generated its first electricity, Argonne scientists calculated that their reactor could indeed breed fuel. Then, early in 1953, a painstaking laboratory analysis showed that EBR-I was creating one new atom of nuclear fuel for each atom it burned. The hoped-for result was a reality.

With that kind of encouragement, Argonne scientists began to design cores that would increase the breeding ratio so the reactor could not only sustain its own operation but also produce a little bit more to fuel other reactors. Three such improved cores were developed over the next 10 years. The last of them — called Mark IV — produced 1.27 new atoms of fuel for each atom consumed. EBR-I was used for research purposes until 1964, when the reactor was decommissioned. Argonne built a new reactor — EBR-II — at INL and operated it from 1964 to 1994.

Distances to nearby cities

EBR-I is 18 miles (29 kilometers) east of Arco via U.S. Highway 20/26, 40 miles (64 kilometers) northwest of Blackfoot via U.S. Highway 26, and 50 miles (80 kilometers) west of Idaho Falls via U.S. Highway 20.

Submitted by Jim AA0DT

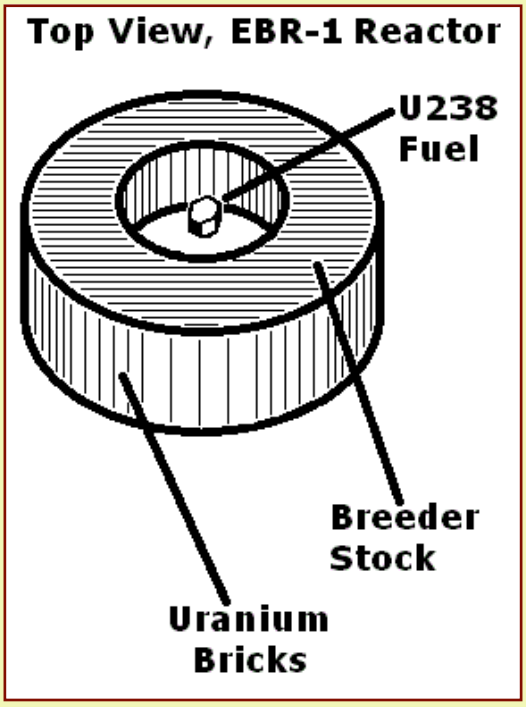
Installing the Mark IV Core into the EBR-I reactor vessel.

Part of the core after the 1955 partial meltdown

Submitted by Jim AA9DT

ARRL Issues Urgent Last Call to Press for Senate Passage of Amateur Radio Parity Act

It's now down to the wire: ARRL has issued a last call for members to urge their US Senators to support the Amateur Radio Parity Act (H.R. 1301) when it comes up during the "lame duck" session of Congress that adjourns in a couple of weeks. The House of Representatives approved the bill in September, and the Senate must follow suit if the bill is to succeed. If it fails in the Senate, the entire process will have to be repeated in the new Congress. The legislation is now in the Senate in two forms -- as H.R. 1301 and alternately in the packaged bill S. 253.



Above pictures and drawing submitted by Jim AA9DT

Foxhunt Report

CFAR 2M Foxhunt - Dec 3rd, 2016 by Mike WA9FTS

Fox - Matt KC9SEM, Patty N9PLS, Mike WA9FTS, Jacob, Mac

Winter has finally arrived with the temp in the mid 30s and snow tomorrow. Five hunt teams were ready to find us. The hunt started at 8:06 PM. We found a spot off North Av west of the starting point but 4 of the 5 hunters did not have a good signal. We move to a higher spot - then more problems. They could not hear us for more than about 5 sec. The 200w amp plugged into a cigarette plug burned out a fuse. There was no power in several plugs so we took the amp out of the circuit and Matt told the hunters to keep coming in the direction they started. We were parked on the north side of North Av near Craig St with a sign that could have blocked the hunters from seeing us as they passed up.

This is what happened as we saw four of the hunters pass us and several came back to pass us again. Tom stopped across the street and drove off. Pete drove in right behind and then back again. He came up to us for his first win with Tom coming back less than a minute later for 2nd. About seven minutes later Marty and Kayle found us for 3rd. Don, who drove past us much earlier, asked about the restaurant. We said it would be Giordano's on North at Kirk Rd. About 10 minutes later, Janet arrive and parked on the other side of a small truck. Marty went over to ask Janet to walk over to end the hunt. She did and, just then, John arrived. We headed for Giordano's. Results:

1. Pete K9PW - 8:58 PM
2. Tom N9CBA - 8:59 PM
3. Marty N9LTE, Kayle - 9:05 PM
4. Janet, John WD9EXW - 9:15 PM

DNF Don W9RA

SRO Officers
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Jean Pressel - KB9FXL
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Mike Shy is published 6 times a year by the Society Radio Operators. Deadline is 2 weeks before the meeting. Contributions are welcome & should be sent to the Editor.

Regular Meeting Place
Salvation Army every even month at 7:30 PM unless other-wise indicated in Mike Shy and SRO web site. Check for exact date & time.

Standing Committees
Membership - WA9FTS
Program - AA9DT
Meeting Refresh. - KB9FXL
Foxhunting - WA9FTS
Repeater - K9IQF
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Education - WA9EVF
Mike Shy - WA9FTS
Picnic - WA9FTS
Christmas / Hanukkah Party - WA9EVF
Webmaster - WA9FTS

SRO Web Site
www.w9sro.org
Mike Brost - WA9FTS

SRO Repeaters	In	Out
CFAR (107.2) PL	147.750	147.150
TOOFAR (110.2) PL	223.260	224.860

Repeater Personnel
Trustee - TBA
CFAR Chairman - K9IQF
Site Maintenance
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Control Operators
K9IQF, TBD
NW Maintenance
W9JEM
Northeast Maintenance
K9IQF & TBD
Lisle Maintenance
W9AEK

Regular meetings - Salvation Army - 8354 W Foster Av, Norridge
Board Meetings - To be announced

Mike Shy

Mike Brost - WA9FTS - Editor
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Norridge IL 60706-3245

First Class Mail

SRO Holiday Party
Hibachi Grill Buffet

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