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RM SOCs Minute

volume 4, edition 2

Special Edition – Spotlight on Yerington

Message from Operations

As we gain proficiency with RAs and TSEAs, do not neglect to consider potential **exit strategies and "gut instincts"** regarding safety. In traveling with my supplier to perform sampling of private potable wells via the kitchen faucet tap in a rural low income neighborhood, multiple HSS&E discussions were held to **discuss visual cues** – snow, traffic, roads, parking, slippery surfaces, dogs. However, the job also involved entering private residences, and we overlooked the possibility of a residence **feeling unsafe or "not right"** once we were inside, a fact that we discerned only upon being welcomed into a dimly lit, multiple adult inhabited residence. All proceeded smoothly, but the importance of an exit strategy and "gut feelings" of safety or insecurity were important lessons learned. **Consider and discuss** with all field teams – especially when working on private property. – *Jane Bohn, Operations PM, IL*

From the Field . . .

***Spotlight on Yerington* . . .** RM crews at the former Anaconda Mine in Yerington, Nevada recently performed an extensive drilling project to determine extent of mine impacts, while at the same time decommissioning much of the old site. In addition to SIMOPS, the site presents several other unique considrations. See page 2 for more!

Consider This . . .

February was "**American Heart Month**." According to the American Heart Association (AHA, www.heart.org), recent studies indicate that **1 in 3 Americans** currently have some form of heart disease – whether high blood pressure, coronary artery disease, stroke, or other conditions. **Heart disease** cost an estimated **$172 billion in lost productivity in 2010, and is the leading cause of death in the U.S.** So how can we take the health part of "health and safety" seriously? **Exercise, diet changes** . . . but did you know that even a moderate increase in physical activity can have positive impact on your life expectancy, and that taking measures to cut back even a small amount on **sodium intake** can have measurable impacts on your health? **When we're healthy, we are able to physically and mentally perform our jobs with greater ability and safety.** This sounds basic, but we need to do it – and encourage others to as well! America is on the verge on tripling the amount we spend treating heart disease by the year 2030 if everything remains as is. So – if you're already working hard on your health, why not grab a friend or neighbor and encourage them to do the same? For more information, sobering statistics, helpful tips and lots of hope, go to *www.heart.org* and click the "getting healthy" tab!

Additional Resources

SOCs Minute Resource Site *http://socs.dataccel.com/ (user ID: socs, Password: safety)*

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Contractor's corner

A recent site investigation at the Sebree Landfill (KY) used rotosonic equipment to advance numerous borings through the closed landfill, on an 8 week, 10/4 schedule. **Unique vapor and weather hazards, the remote location and challenging drilling conditions meant extensive preplanning.**

Harmful vapors. The landfill contains spent potliner from an aluminum smelting plant, which combines with moisture and other landfill gases to create highly hazardous and volatile vapor risks. The team utilized **high powered blowers** to generate air flow over each boring and piezometer, drillers wore **air (and H2S) monitors**, and everyone was fit tested for respirators.

Extreme cold. The drilling project took place between December and January, with **20°F temps, snow and ice, and 20 mph winds**, in addition to winds generated by the blowers. Glove liners, instant disposable hand warmers, balaclava face masks, a coffee pot for heating tea/coffee/hot chocolate, and sugary snacks were provided to mitigate cold stress. **Hydration, caloric intake and dry clothing** replacements were stressed to the team.

Towards the end of the 8 week job, as patience can wear thin and attention can shift to getting done and going home, a **second field team was brought in to provide backup** and help punch out the last items. The project was completed without incident! – *special thanks to Parson's PM Scott Hartsough, BP PM Mike Whelan, and all Sebree LF site investigation personnel!*

@Traction

A look at Traction data for January and end of December indicates **defective equipment and preventive maintenance are still key issues** across RM sites. Should questions remain regarding BP's Integrity Management program, please contact your BP PM for more information. **Winter storms** also played a role in incident reports. **Stay alert for snow and ice conditions** – both on the roadway, and blowing off other vehicles into your line of travel, as well as slip/fall hazards on icy ground. Consider how to better **alert your team and plan for hazardous ground conditions** during the remainder of this winter season, and continue to utilize **Control of Work to reassess and modify job procedures** affected by winter weather.

The Yerington Mine remediation project is a former open pit copper mine and mine tailings area encompassing 3,600 acres. In addition to **decommissioning the old mine,** remedial activities include **determining the extent of mine-impacted groundwater** and devising a remedial action plan to address this. To this end, SIMOPs occur on a daily basis.


Transite Pipe

Special thanks to all Yerington site personnel!

Sub Area A

DRILLING


Drilling

The field remedial crew began an **extensive drilling program** this past April to investigate groundwater aquifer characteristics. By collecting discrete zonal water samples at different depths, a 3-D model of water quality will be developed for the site. Generally, 3-5 wells were drilled at each cluster, for a total of 123 new monitoring wells and 26,000 feet of core drilling completed in 2010-2011. At its peak, seven sonic rigs, one air-rotary (ARCH) rig, two hollow-stem auger (HSA) development rigs, 27 drillers and 9 geologists worked simultaneously, with the **sonic rigs setting a new west coast depth record of 717 feet.**

With a rigorous 10/4 schedule and 8 – 12 hour days, **safety controls** were implemented to help keep people focused:

1) Group safety meetings with the entire team were held **at least twice per 10 day shift** to ensure important safety messages were communicated and to enable knowledge sharing (**in addition to daily** drill rig safety meetings).

2) Geologists were rotated to different drill crews occasionally, to combat complacency, provide a fresh set of eyes and facilitate communication and experience among the group.

3) Zonal water sampling has built in rest periods when activity levels are low – these **helped prevent over-exertion and mental and physical fatigue**, and allowed for additional **safety conversations, review of TSEAs,** etc.

4) Work was completed by late morning on the last day of the shift **so that crews could travel home** without having already put in a full day. (Most personnel lived several hours away and stayed temporarily in hotels during the 10 day shifts.)

Drill sites also had to be **designed to allow for quick evacuation** by at least one vehicle, including an escape path and a parking area on solid ground (as opposed to soft sand), as sudden wild fires are a common threat. "**Team communications** was a big part of the success of the drilling program including **sharing lessons** from one rig to the next and **communications between** geologists, drillers, field managers and other SIMOPs," says Penny Basset of Brown & Caldwell.

Construction & Removal Actions

1) Transite Pipe. One of the removal projects involved handling of old asbestos containing transite pipe. The field crew developed an onsite landfill cell to dispose of the majority of the collected pipe. Asbestos, heavy pipe, and heavy equipment were all hazards associated with this task. **Respirators, tyvek suits, air monitoring stations, and hand signals** were all used to help mitigate these hazards.

2) Sub Area A cover. Large haul trucks were mobilized to cover a former evaporation pond, Sub Area A, with vat leach tailings (VLT) taken from on-site borrows. In some spots, up to 36" of VLT was required to stabilize the soft field. Belly loaders deposited VLT as they traveled around the circumference of the field; haul packs dumped their loads at designated spots where a GPS front loader distributed the VLT evenly. Because the haul trucks were so large, they were **designated with the right of way** on-site, and given **designated haul roads** up and down the heap leach pads, which can be more than 100 feet in height.

3) Building demo. Several old process buildings were recently torn down and removed, as they presented a safety hazard due to failing structural integrity and naturally occuring radioactive material/technologically enhanced naturally occuring radioactive material (NORM/TENORM) exposure. Deconstructing the buildings was done carefully to **mitigate dust** hazards, which included mold, metals, and **TENORM impacted materials,** and to ensure waste was **sized and stored for safe and secure loading and transport** off-site. Other hazards included poisonous spiders and scorpions, cutting hazards, and falling objects.

4) Rad Excavations. Several small areas of radiation impacted soils were also excavated, creating 17 "pot holes" of various sizes and shapes. The sides of the excavations have been **sloped to prevent slip/trip/fall** hazards.

5) TENORM soils. TENORM impacted soils were trucked to a low-level radioactive waste (LLRW) disposal facility during November and December, with 12 – 18 trucks entering and leaving the site each day. Drivers were required to **stay in their cabs** as trucks were loaded by an excavator and monitored by site personnel in full respirator & tyvec suit. To verify DOT requirements were met, trucks were **inspected before leaving** the site by another 2 site personnel using instrumentation to check the load for radiation levels, and to ensure the sides of the truck were clean for transport off-site.

6) Traffic hazards. The main site access road is also used by local residents, who often drive at dangerously high speeds and limited visibility due to the road's dips, hills and curves. A community **contact works to mitigate this**, and a full time **guard at the site gate helps gate traffic** proceed more smoothly and quickly.


TENORM load

7) Ongoing safety. Construction and removal action teams meet together for a **daily safety meeting,** before heading to their separate jobs. Site personnel are asked to carry a **list of site phone numbers** in their vehicles, including emergency contact numbers. Somewhat remotely located, the site is also **preparing to add a helipad** for medical access.