

Moab UMTRA

Uranium Mill Tailings Remedial Action



January
2021

Working
conditions
after
December
snowfall

MTPSC Status Update
by Russ von Koch
Grand County UMTRA Liaison





A sunny fall/winter with little snowfall has made for good work conditions

Highlights



- **Operations continued uninterrupted with safety modifications during Covid-19**
- **Generally maintained 4 trains per week to CJ during 4th Quarter 2020 – RAC worked between EOY holidays to maintain train deliveries.**
- **Oct 86 k tons, Nov 74 k tons & December 76 k tons (10 % > FY 20 monthly average)**
- **Moved 70% of the est. total tonnage since project inception**
- **More than 11.2 million total tons moved**
- **Cumulatively removed 954 k lbs. ammonia and 5.3 k lbs. uranium from reaching river**

Observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 3198.





**Applying water to excavator work area
for dust control**



**Watering edge of conditioning bed
for dust control**



The size of the mixed debris /tailings bed decreased.



Excavating & transporting RRM for conditioning near southerly end of pile



**Loading RRM that meets transport specs
into a container for train shipment**



Adjacent loading areas in northern conditioning beds helps keep trucks moving.



Sorting area with additional mill debris

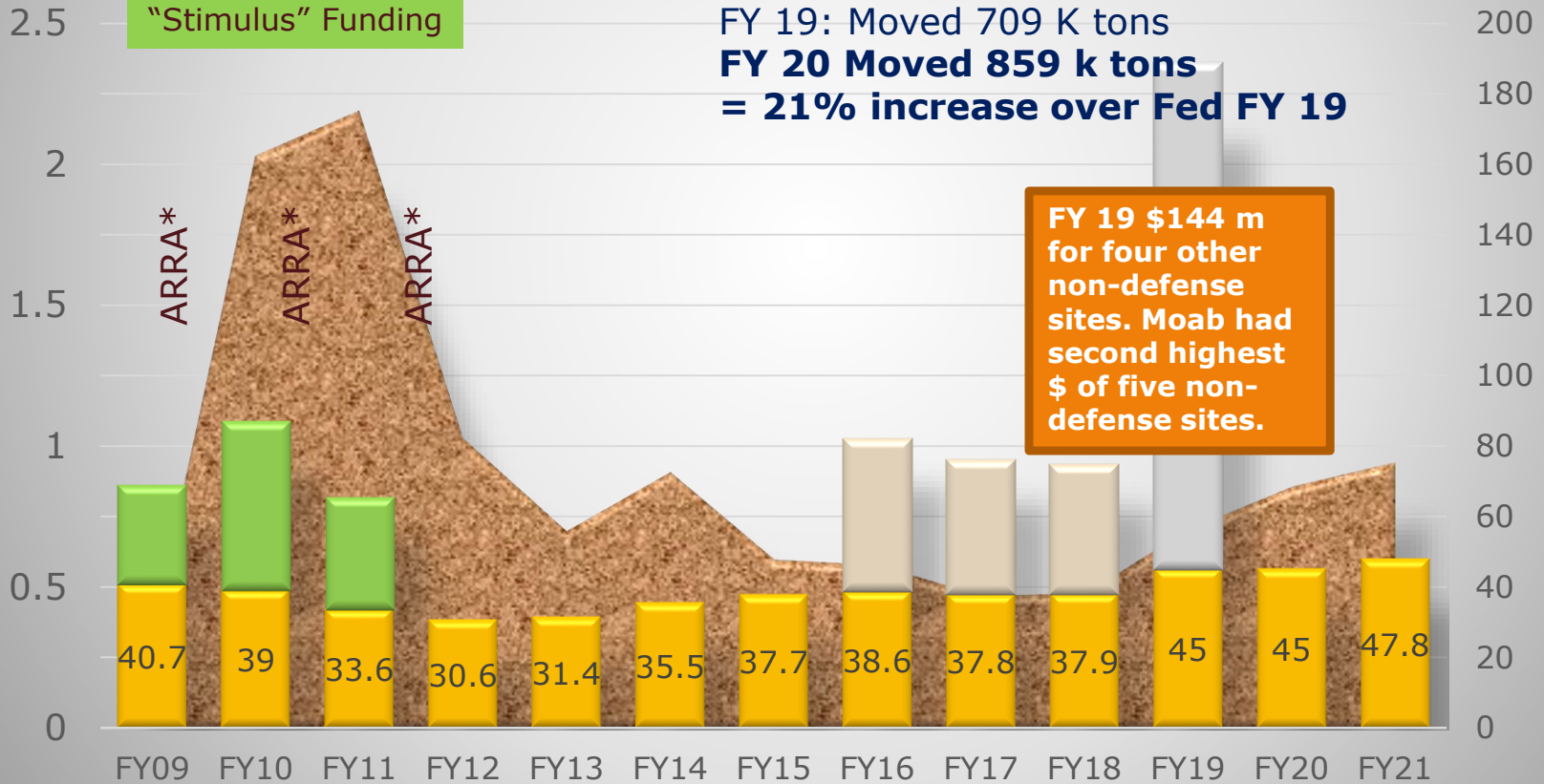
Tailings Removed & Budget History

(Millions of Tons & Dollars per Year)

* American Recovery and Reinvestment Act of 2009, aka "Stimulus" Funding

Moab Regular Funding (Million \$)

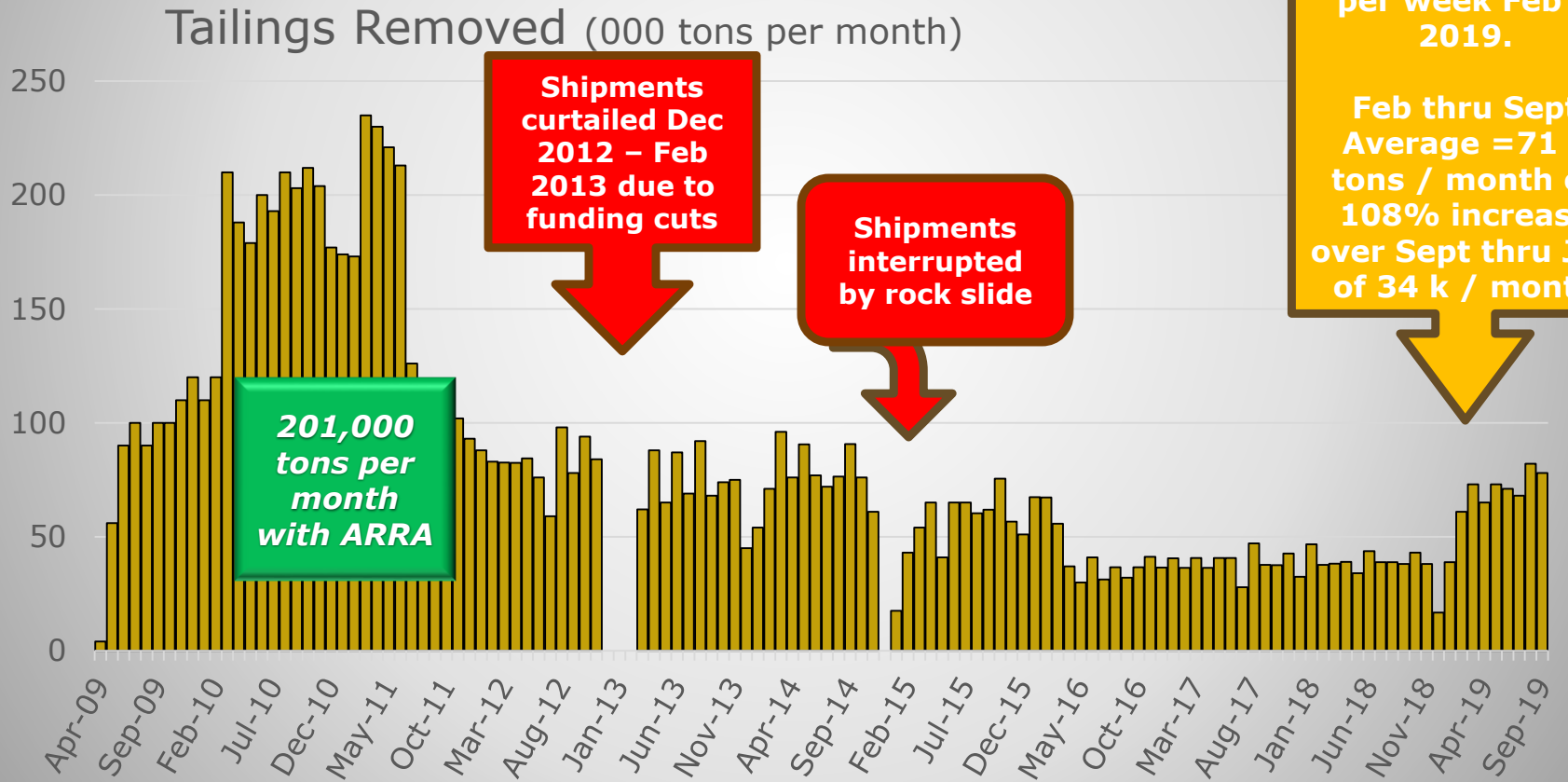
FY 18: Moved 469 K tons
 FY 19: Moved 709 K tons
FY 20 Moved 859 k tons
= 21% increase over Fed FY 19



FY 19 \$144 m for four other non-defense sites. Moab had second highest \$ of five non-defense sites.

Tailings shipment and funding information provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the MTPSC, as established by Grand County Resolution 3198. * ARRA \$ all came in FY09. **Liaison estimated FY21 tonnage at 944 k tons by projecting from first quarter FY 21 Oct-Dec AVE. tons of 78.7 k.**

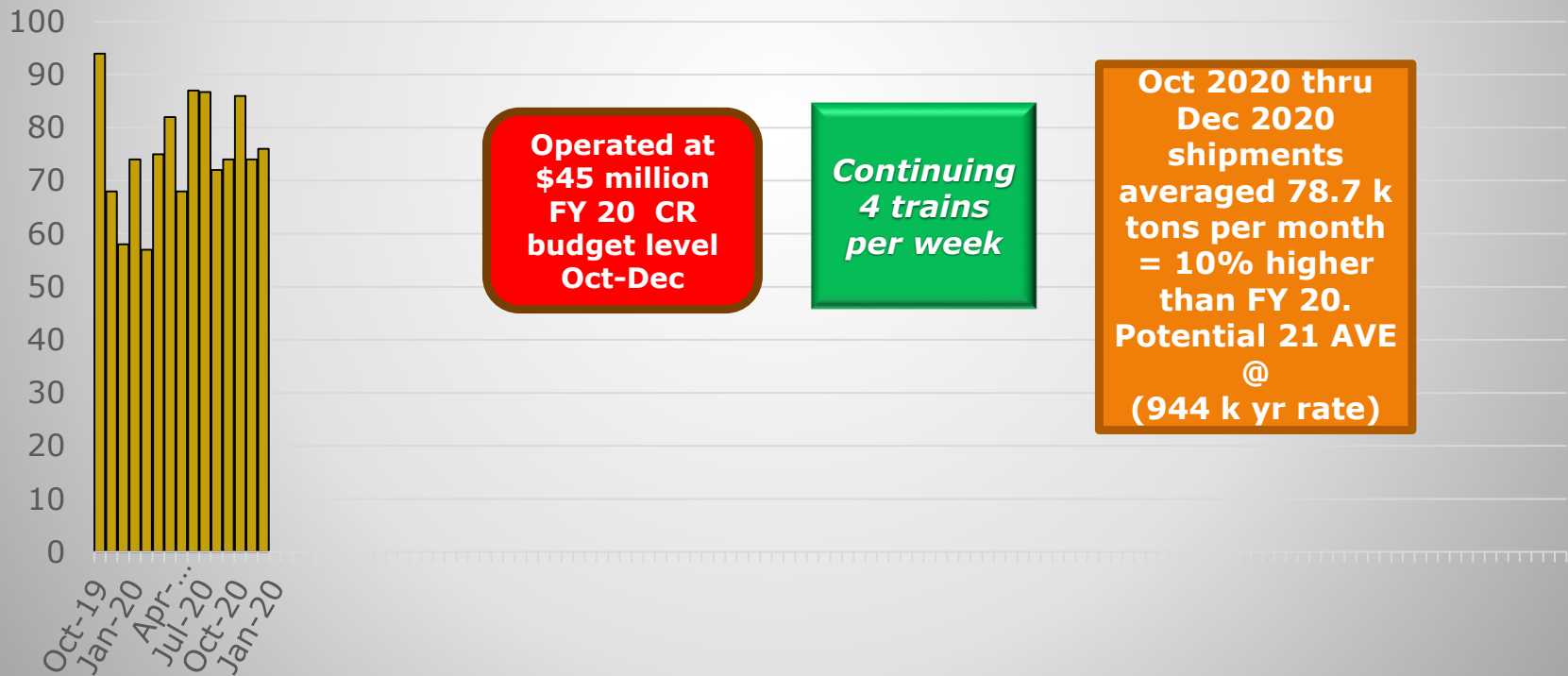
➤ **Monthly Tonnage Shipments Slide 1 of 2**
 ➤ **April 09 through September 2019**



Tailings shipment and funding information provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 3198.

- **Monthly Tons Slide 2 of 2 (Oct 2019 →)**
- **Fourth Quarter 2020 shipments (1st Qtr FY21) averaged 78.7 k tons per month. Could be best year since FY12**

Tailings Removed (000 tons per month)



Operated at \$45 million FY 20 CR budget level Oct-Dec

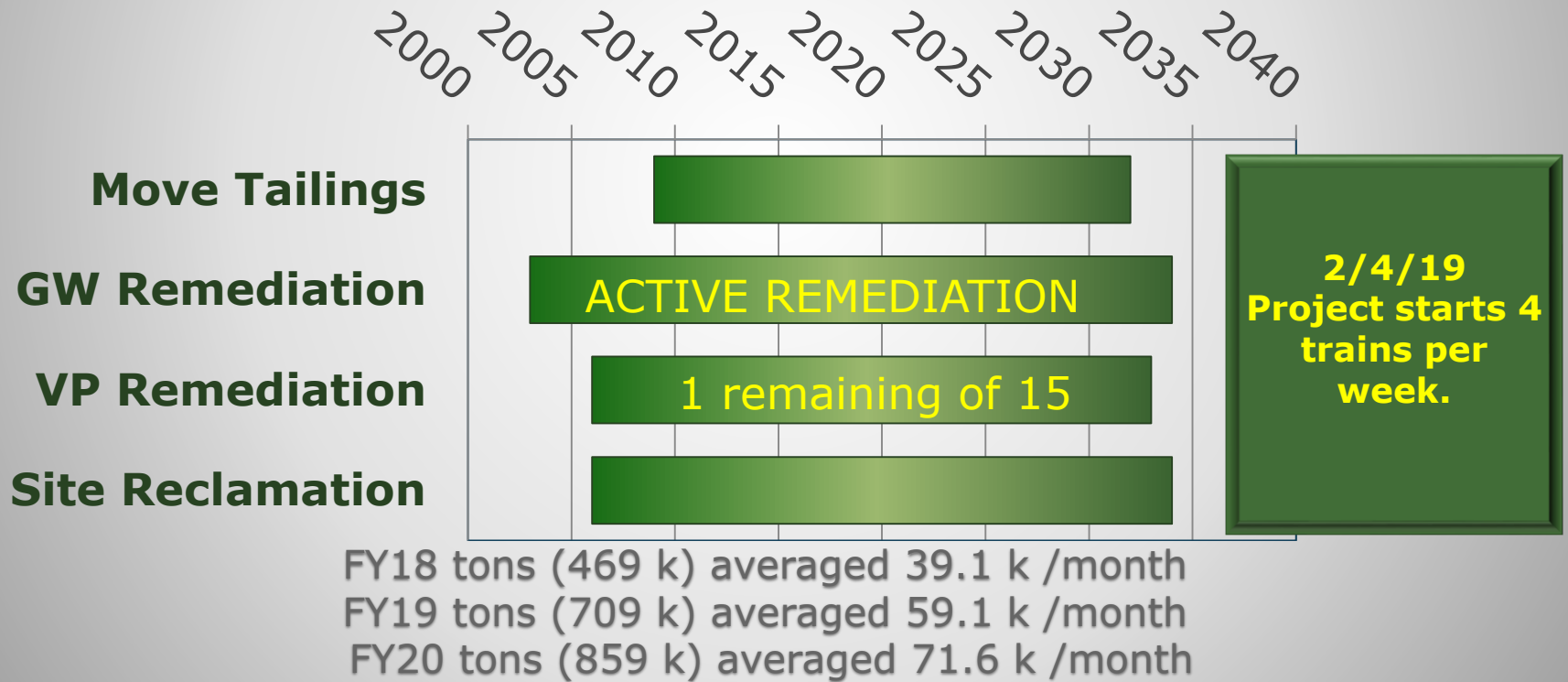
Continuing 4 trains per week

Oct 2020 thru Dec 2020 shipments averaged 78.7 k tons per month = 10% higher than FY 20. Potential 21 AVE @ (944 k yr rate)

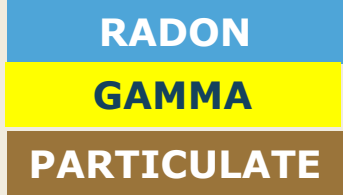
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Main Project Goals

- Move tailings away from Colorado River
- Protect river by intercepting ground water contaminants
 - Remediate vicinity properties (VP)
- Reclaim project sites at Moab and Crescent Junction



Per Cent of Allowable Impact



Guideline **3.7**

Offsite radon not to exceed 3.0 pCi/L above background

2.5

Radon level at south boundary

Background **0.7**

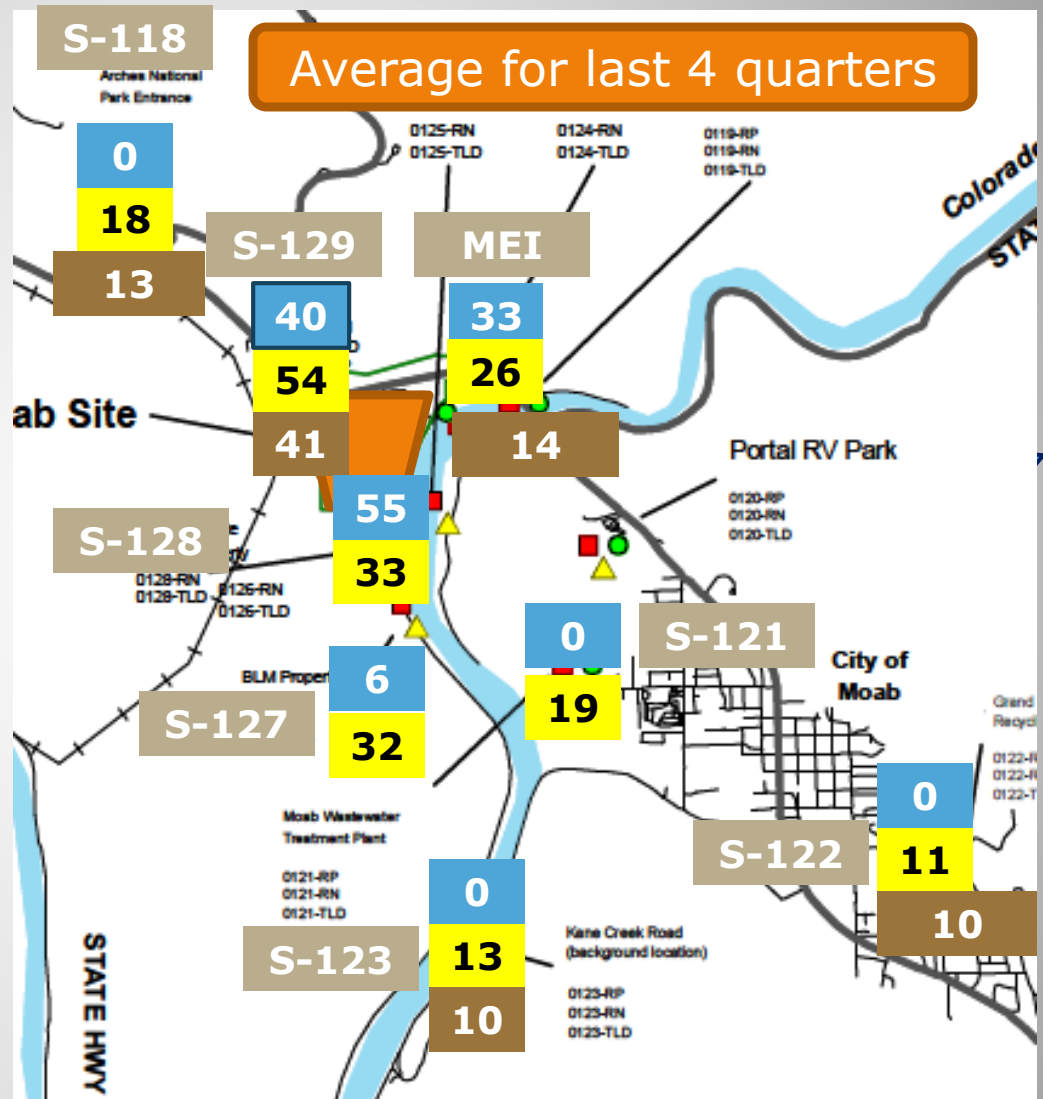
0

100%

60%

0%

Average for last 4 quarters



Impacts Around Moab: 19Q4-20Q3

pCi/L = picoCuries per Liter, radiation from Radon gas in the air, L4Q average

Per Cent of Allowable Impact

RADON
GAMMA
PARTICULATE

Average for last 4 quarters

mREM

192

100%

Gamma Guideline

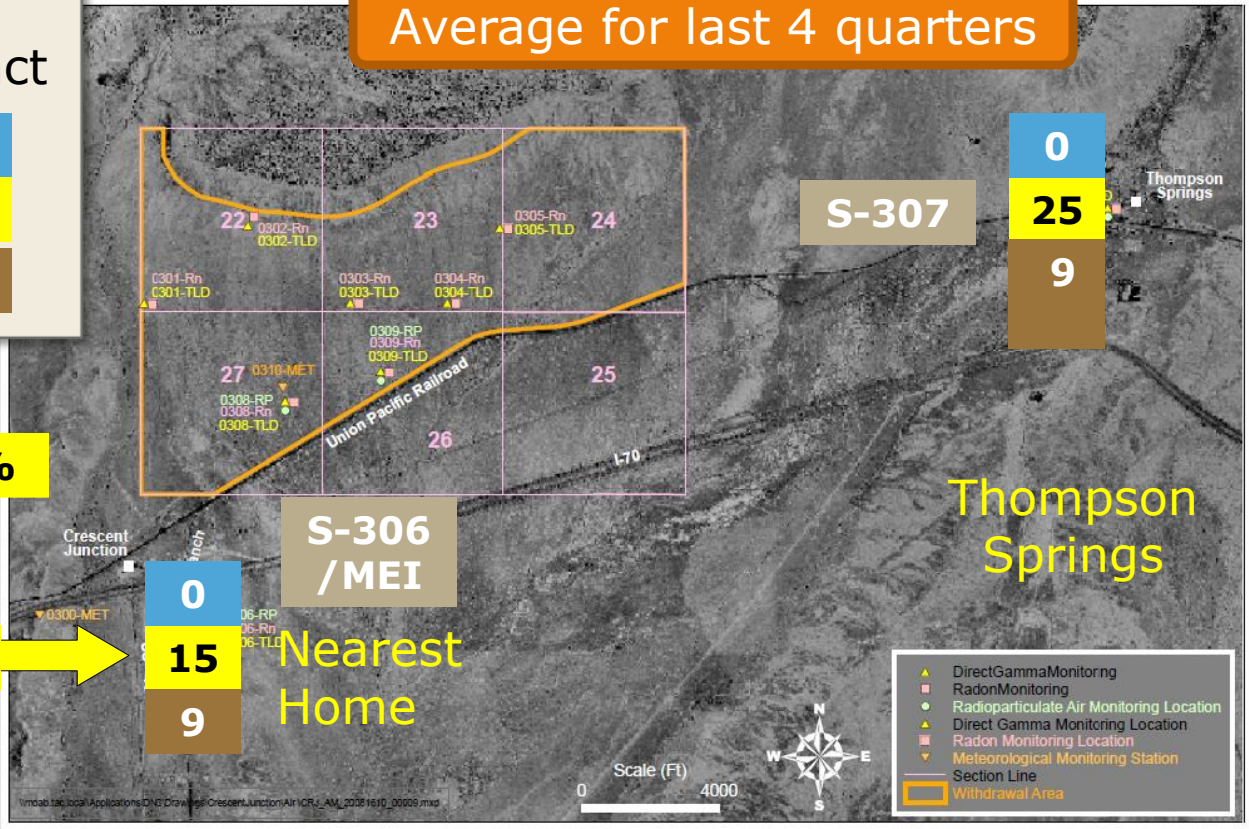
118

26%

0%

Background 92 mREM in CJ area

0



0
25
9

S-307

S-306 /MEI

Nearest Home

Thompson Springs

Guideline: Gamma not to exceed 100 mREM/yr above background.
Gamma total for last 12 months at nearest home was 118 mREM, or 26% above CJ background of 92 mREM.

Impacts Around CJ: 19Q4-20Q3

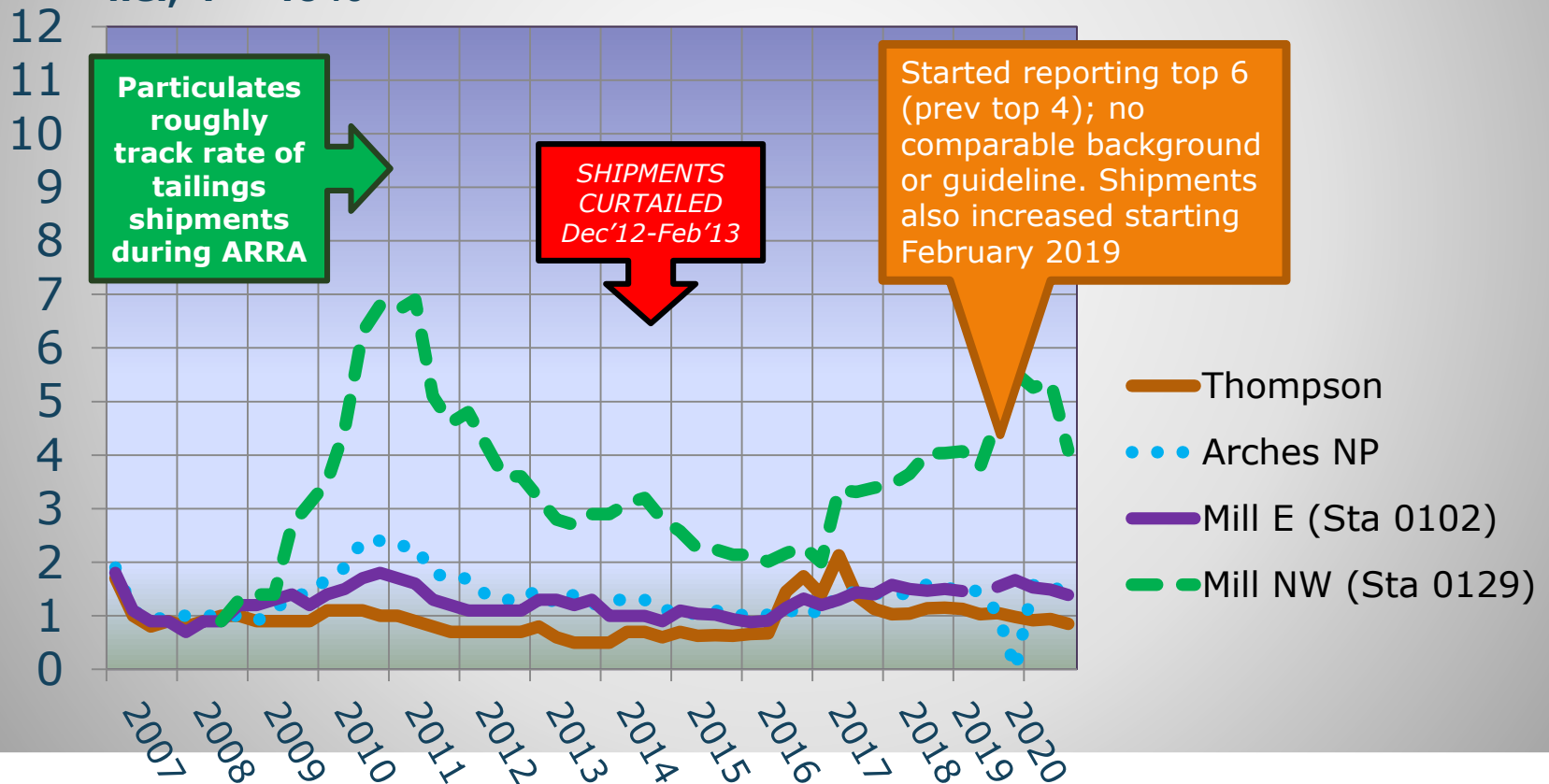
mREM = milli-Roentgen Equivalents in Man, biological dose equivalent, sum of L4Q

Airborne Radioparticulates

Total DCG for 19Q3 – 20Q2

Total mREM L4Q multiple vertical axis by 10 to convert to % of alim. i.e., 4 = 40%

DCG = Derived Concentration Guideline, a calculated estimate of radiation levels from radioparticulates



Environmental monitoring data provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 3198.

19Q4-20Q3 Four-quarter Moving Average Summary

27 total measurements from 10 Stations

From the prior 4-quarter moving average, 3 measurements were up, 14 down, and 10 were same

Radon → 3 stations were up, 1 down, and 6 unchanged

3% up Moab MEI

2% up S-127 $\frac{3}{4}$ mi. S on SR 279

1% up S-129 NW corner (SR 279/US191)

Gamma → 0 stations were up, 9 down, 1 one was unchanged

6% down S-123 Kane Creek Rd and S-306 CJ MEI

5% down S-122 Recycle Center & S 307 W Thompson

4% down S-118 Arches VC and S-129 NW corner

3% down S-121 Moab WWTP and S-127 $\frac{3}{4}$ mi. S on SR 279

Particulate → 0 stations were up, 4 down and 3 remained the same

13% down S-129 NW corner

3% down, S-118 Arches

1% down Moab MEI and S-123 Kane Creek Rd

Quarterly Monitoring Station Radiation Trend

Ground Water Remediation



Injection wells
between side channel
and Riverside Trail

Project reported cumulative totals of
over 954,000 pounds of ammonia
& more than 5,300 pounds of
uranium extracted thru 2020
(kept out of river)

- Extraction wells between pile and river intercept contaminated ground water
- Fresh water “curtain” injected when river is low
- Side channel habitat protected seasonally with added fresh water
- Suspended during CO River Flooding

- ACTIVE ground water remediation could continue 1-2 years after pile removed. Supplemental standards may be applied for PASSIVE remediation.

Well field data provided by Moab UMTRA. Other observations provided by Grand County UMTRA Liaison on behalf of the Moab Tailings Project Steering Committee, as established by Grand County Resolution 3198.

To Learn More



- **Online**

- <https://gjem.energy.gov/moab/>
- GrandCountyUtah.net (“Moab UMTRA Project”)

- **Public meetings**

- *Moab Tailings Project Steering Committee, quarterly (Jan 28, May 26 (cancelled), July 28 and Oct 27, 2020)*
- *Site Futures Committee, 2013 and 2018*

- **UMTRA Reading Room (Library)**

- **Contact Grand County’s UMTRA Liaison**

- 259-1795 (working from home)
- rvonkoch@grandcountyutah.net

