

Moab UMTRA

Uranium Mill Tailings Remedial Action



**October
2020**

Long standing
mixed mill
debris and
RRM bed:
going, going,
...

MTPSC Status Update
by Russ von Koch
Grand County UMTRA Liaison



Highlights



- **Operations continuing with safety modifications during Covid-19**
- **Continued 4 trains per week to CJ during third calendar quarter 2020**
- **July 86.7 k tons, August 72 k tons & September 74 k tons**
- **Three new additional rail cars increasing shipments**
- **Moved about 68% of the est. total tonnage since project inception**
- **More than 11 million total tons moved**

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





North Area Operations



**Loading RRM for Transport to
Nearby Conditioning Beds**



Building New Conditioning Beds in Foreground. Loading RRM from Older Beds for Train Transport in Background



Another view of new NE side conditioning beds



Reducing Pile by Moving RRM Down for Transport to Conditioning Beds

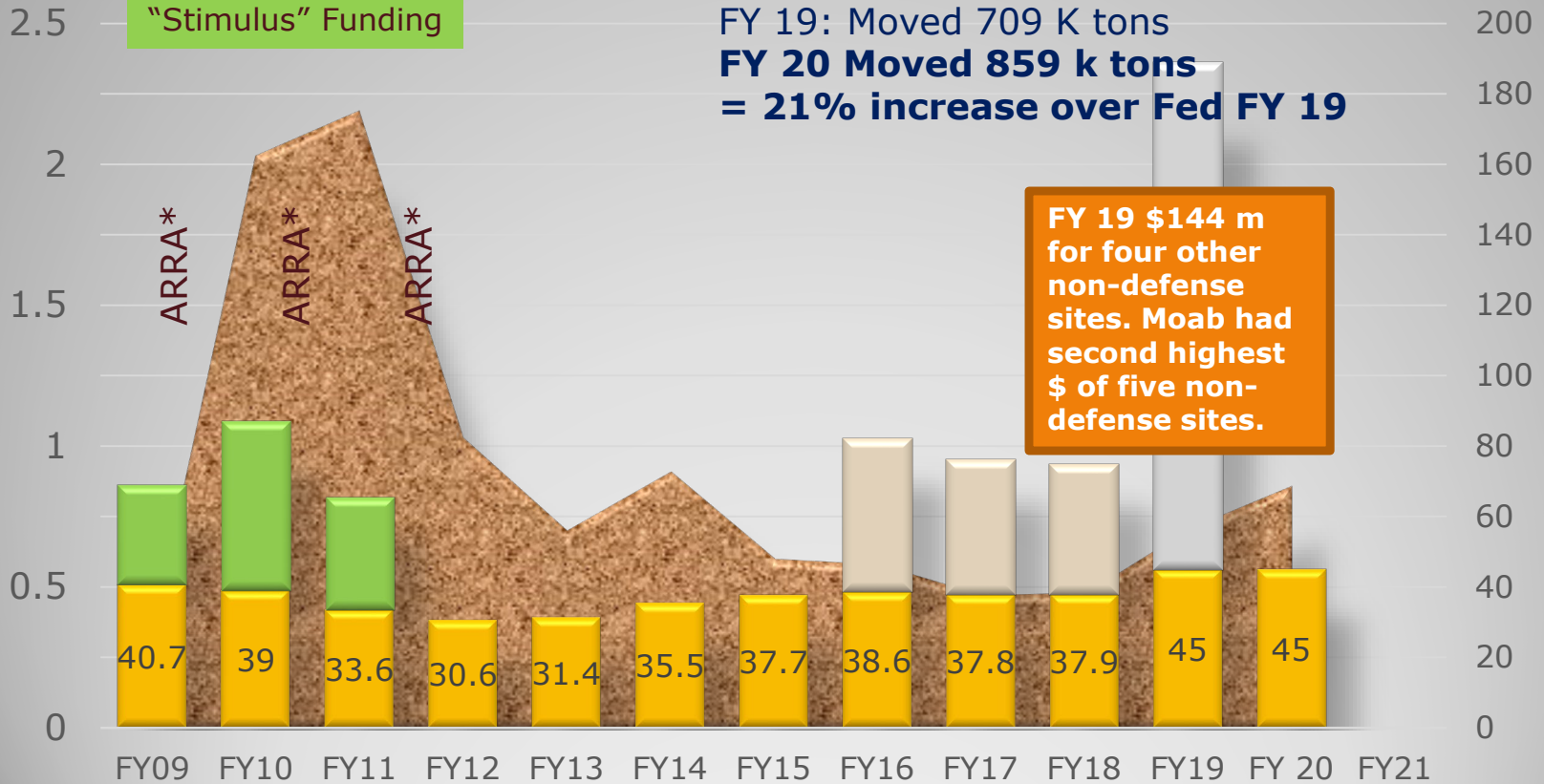
Tailings Removed & Budget History

(Millions of Tons & Dollars per Year)

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

Moab Regular Funding (Million \$)

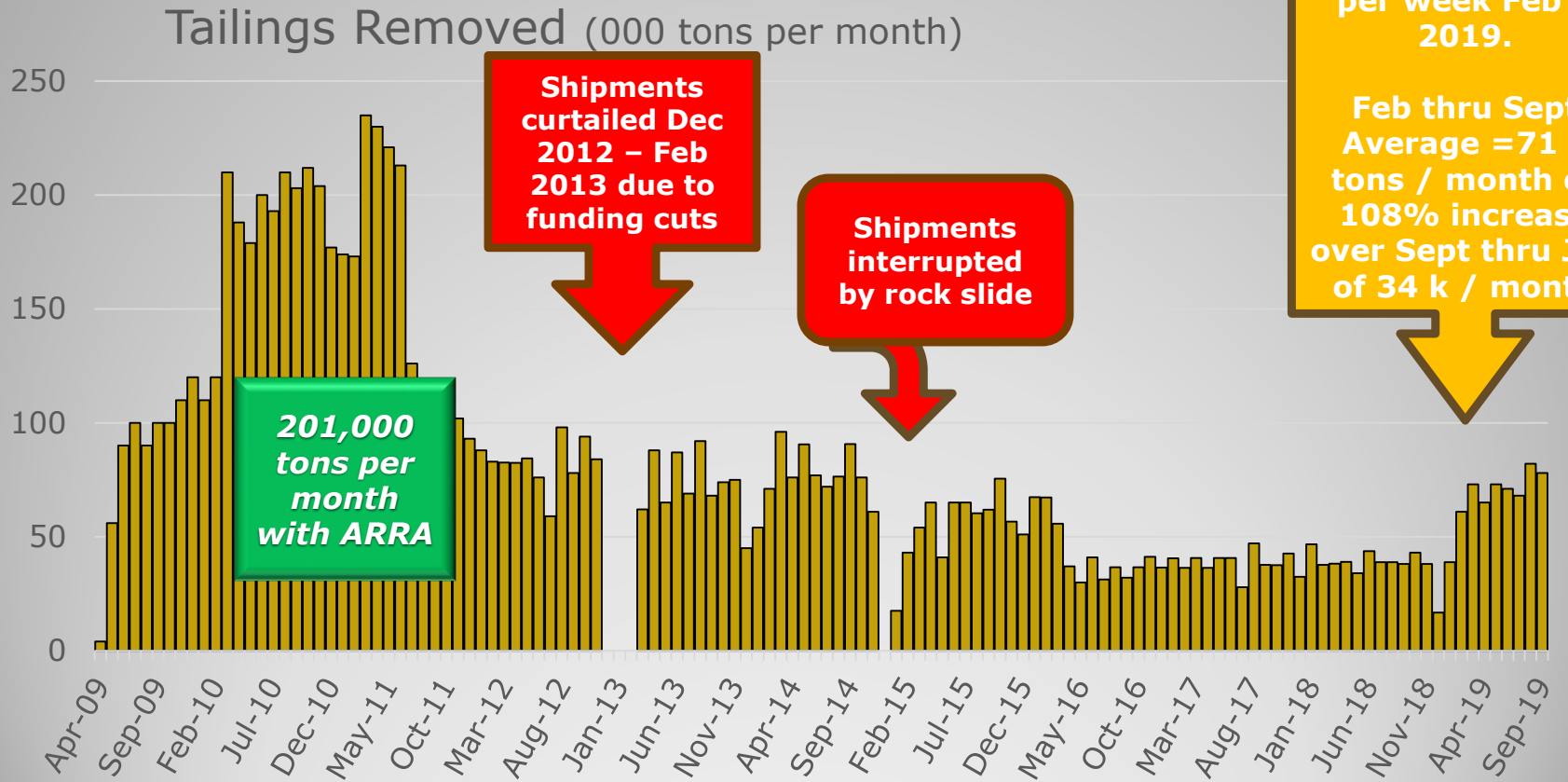
FY 18: Moved 469 K tons
 FY 19: Moved 709 K tons
FY 20 Moved 859 k tons
= 21% increase over Fed FY 19



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 Moab Tailings Project Steering Committee, as established by Grand County Resolution 3198. * ARRA \$ all came in FY09. **Liaison estimated FY20 tonnage at 862,000 tons by combining CY 19 and FY 20 months.**

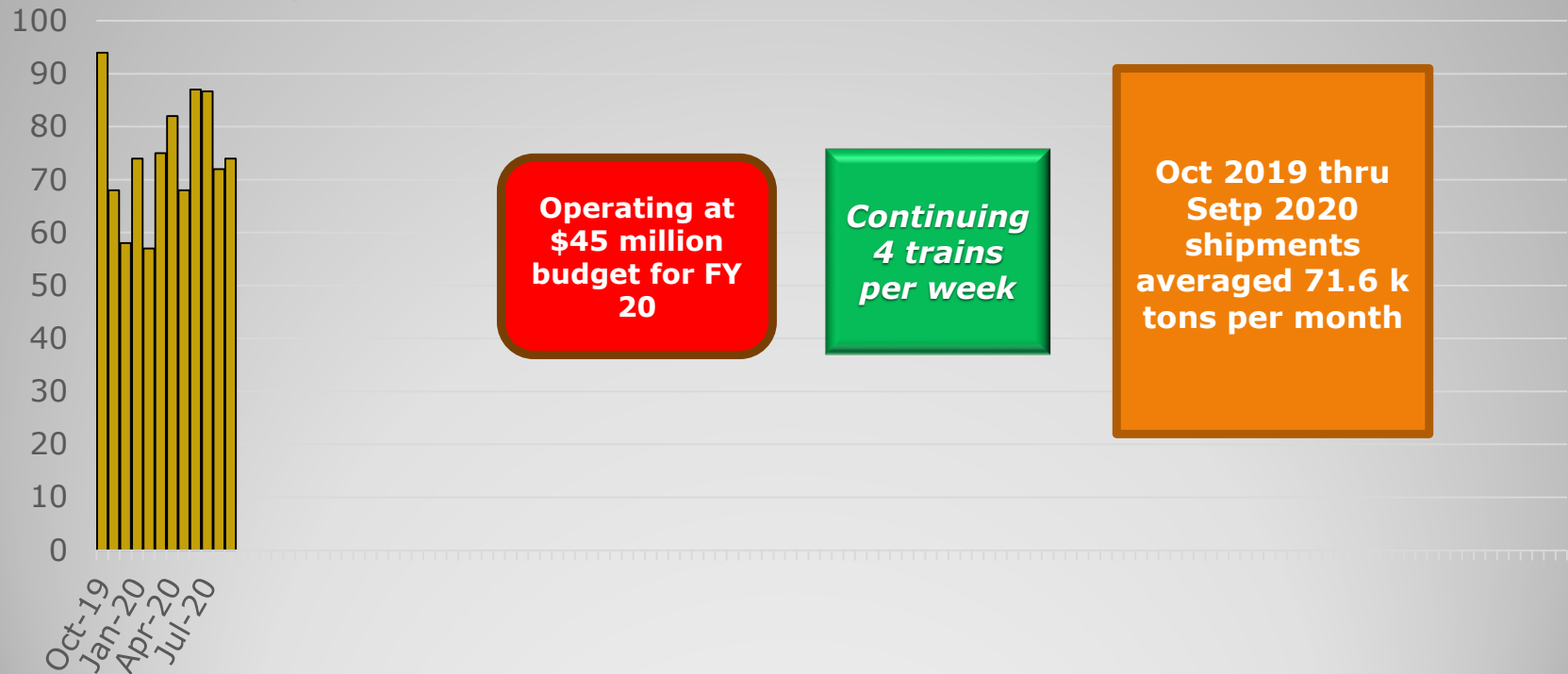
➤ **Monthly Tonnage Shipments Slide 1 of 2**
 ➤ **April 09 through September 2019**



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 →)**
 - **Third Quarter 2020 shipments averaged 77.5 tons per month**

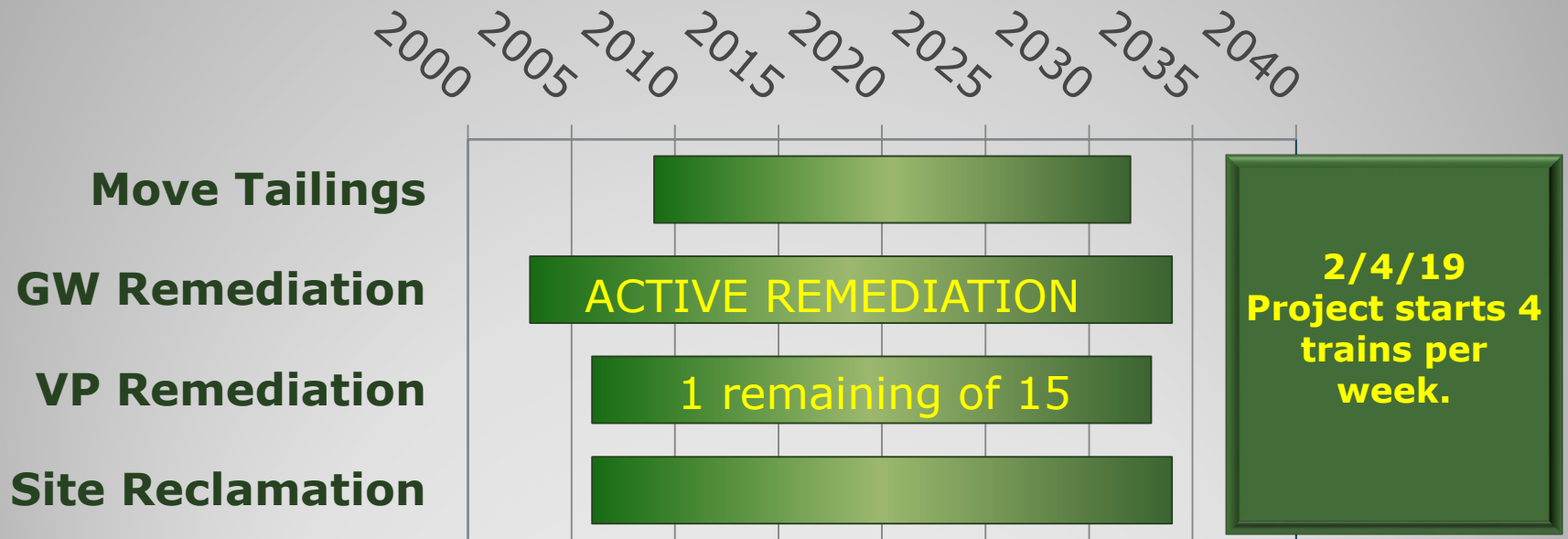
Tailings Removed (000 tons per month)



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.

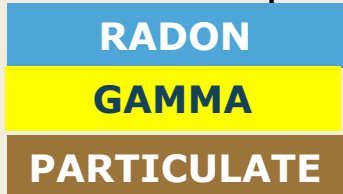
Main Project Goals

- 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



CY18 tons (451.8) averaged 37.7 K /month
 CY19 tons (829.8) averaged 69.1 K /month

Per Cent of Allowable Impact



Guideline **3.7**

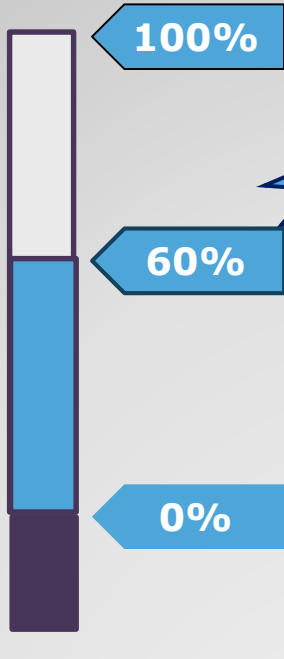
Offsite radon not to exceed 3.0 pCi/L above background

2.5

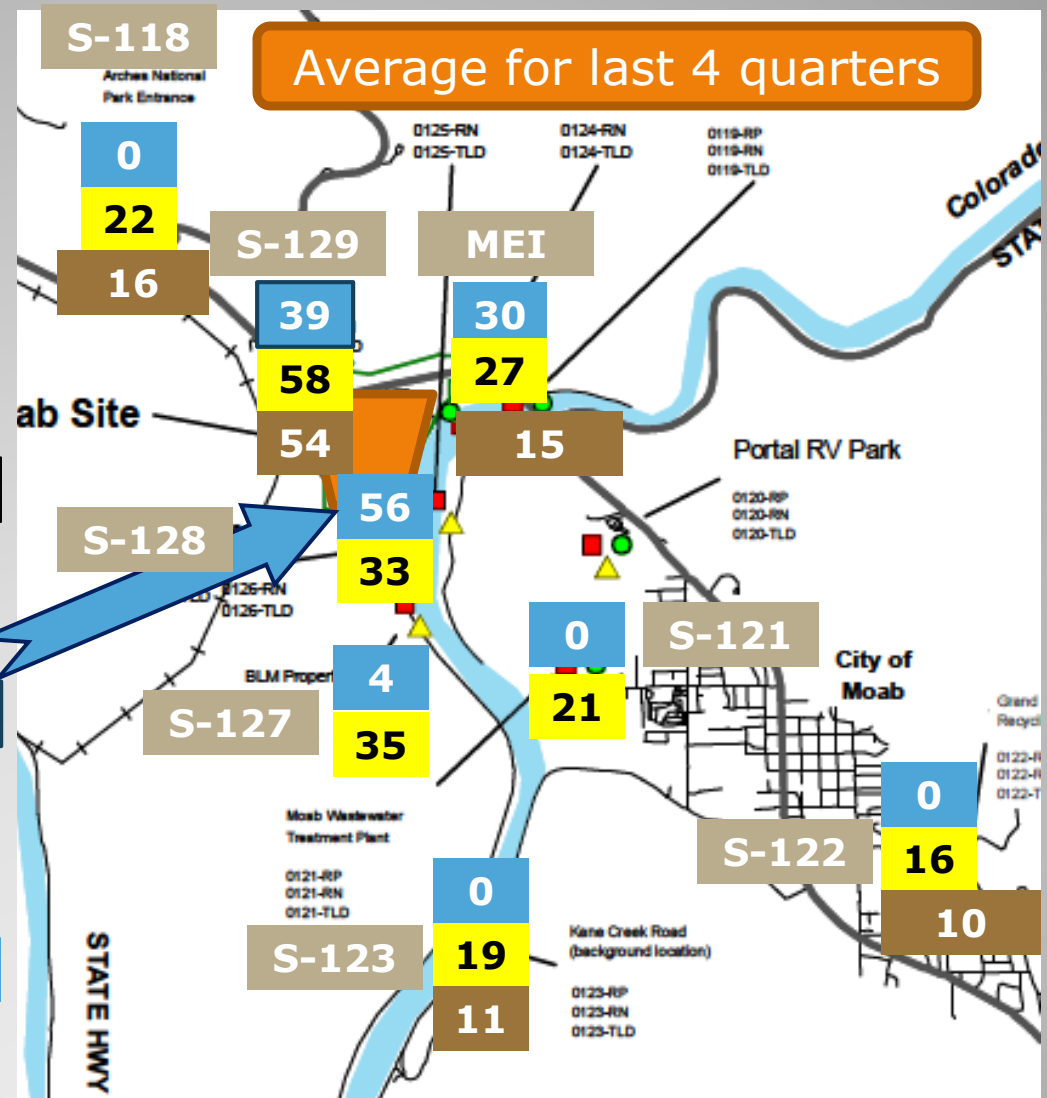
Radon level at south boundary

Background **0.7**

0



Average for last 4 quarters



Impacts Around Moab: 19Q3-20Q2

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

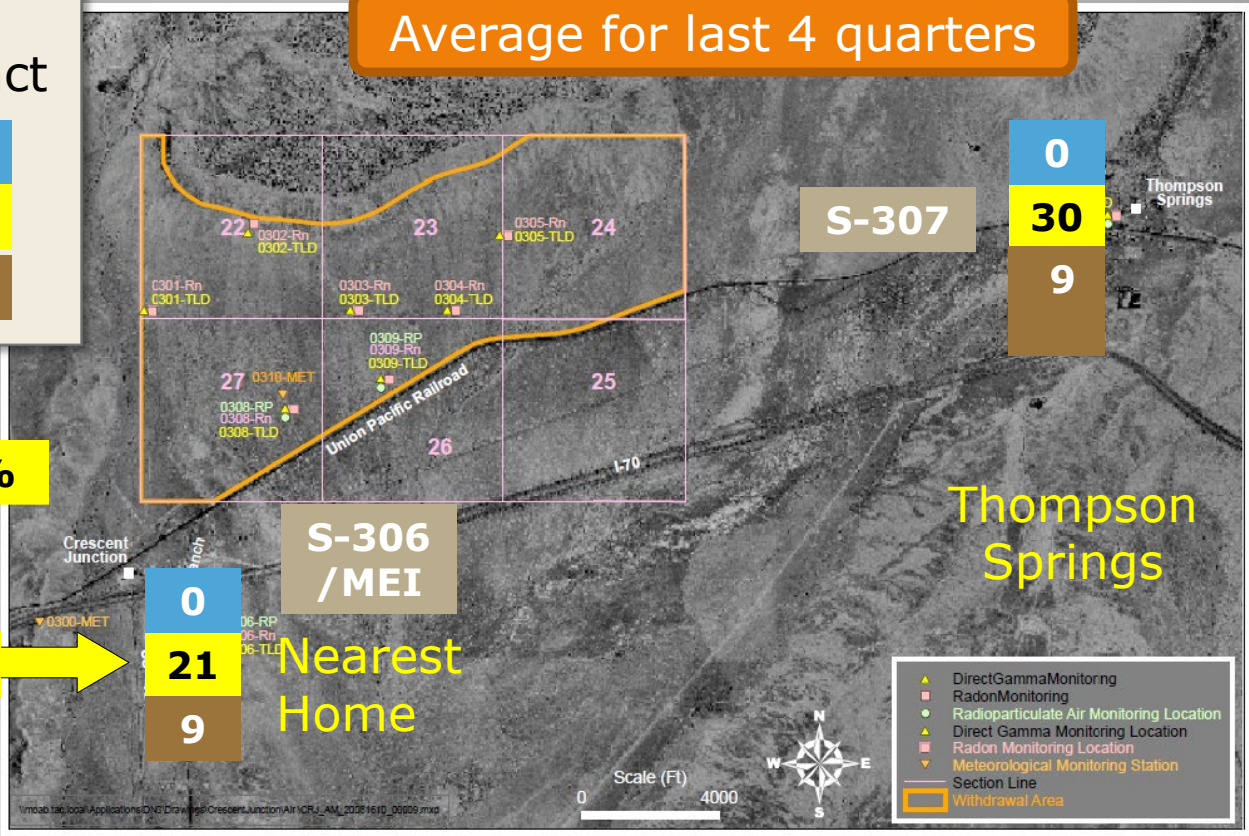
118

26%

0%

Background 92 mREM in CJ area

0



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: 19Q3-20Q2

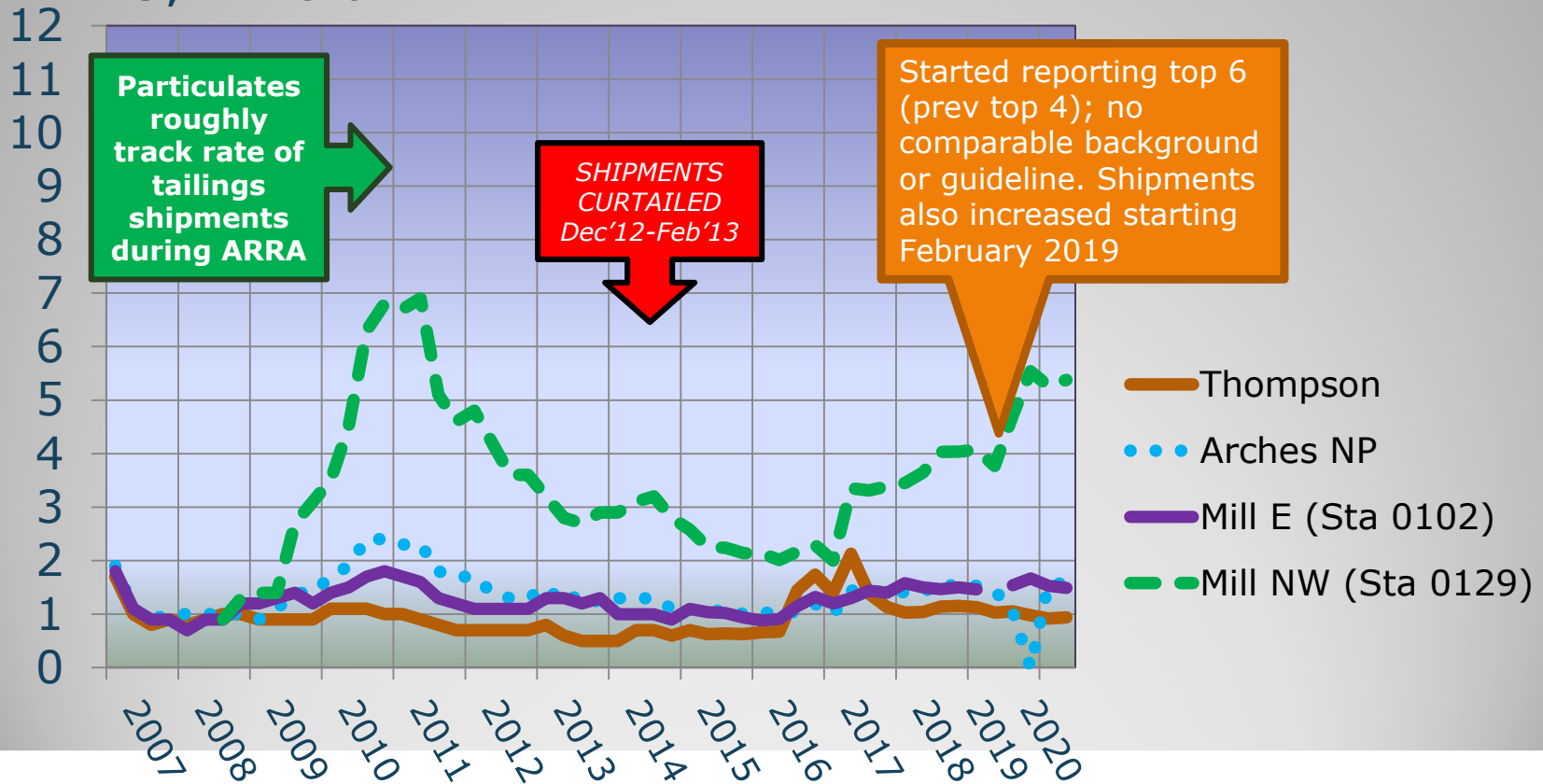
mREM = milli-Roentgen Equivalents in Man, biological dose equivalent, sum of L4Q

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.

Third Quarter 2020 Four-quarter Moving Average Summary

27 total measurements from 10 Stations

From prior quarter 2 were up, 15 were down, and 10 were same

Radon → 5 stations down and 5 remained at 0

5% down #127 $\frac{3}{4}$ m s on SR279

3% down Moab MEI and #129 NW Mill Site

1% down #118 Arches and #128 $\frac{1}{10}$ m s SR279

Gamma → all 10 stations down

6% down Moab MEI and #129 NW Mill Site

5% down #118 Arches, #127 $\frac{3}{4}$ m s SR279, #128, $\frac{1}{10}$ m s SR279, CJ MEI

4% down #122 Recycle Ctr

3% down #307 W Thompson and # 123 Kane Crk Rd

Particulate → 2 stations up and 5 remained the same

1% up #123 Kane Crk Rd and #129 NW Mill Site)

Quarterly Monitoring Station Radiation Trend

Ground Water Remediation



Injection wells
between side channel
and Riverside Trail

Project reported totals of
over 951,000 pounds of ammonia
& more than 5,300 pounds of
uranium extracted (September 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

