

Environmental Updates

*Brookhaven National Laboratory
Community Advisory Council Review
March 12, 2015*

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Environmental Update Topics

- **Deer Management Update**
- **Peconic River Supplemental Sediment Sampling**
- **Former Hazardous Waste Management Facility (FHWMF) Perimeter Area Remediation – Phase 3**
- **Freon-11 Groundwater Remediation**
- **Reactor Surveillance and Maintenance**
- **Building 811 Planned Demolition**

Deer Management Update

- **January 2015**
 - Monday Memo published
 - Employee brown bag information session held
 - Work planning to refine all details proceeded
 - Baiting started mid-January
 - Once every 4 – 5 days
 - Nightly towards the end of January through end of cull



Deer Management Update

- **February 2015**
 - Mobile deer processing facility arrives February 6
 - February 7 - Cull starts with 3 PM run through with Laboratory Protection and a 6 PM tailgate meeting to go over safety.
- **Cull conducted (300 deer taken)**
 - February 7 – 106 deer taken by 6 AM next morning
 - February 8 – 97 deer taken by 6 AM next morning
 - February 9 – 74 deer taken by 5:30 AM next morning
 - February 10 – 23 deer taken by 8:30 PM
- **Processing – all deer processed on site with work completed by February 12.**

Deer Management Update

■ Deer Meat

- 7,340 lbs of meat produced, ~ 25 lbs/deer
- Frozen meat picked up on Feb. 12 stored at Dutchess County Federation of Game and Fish Clubs, Hunters for the Hungry venison donation program
- Distributed to churches and food pantries from Saratoga County south to New York City

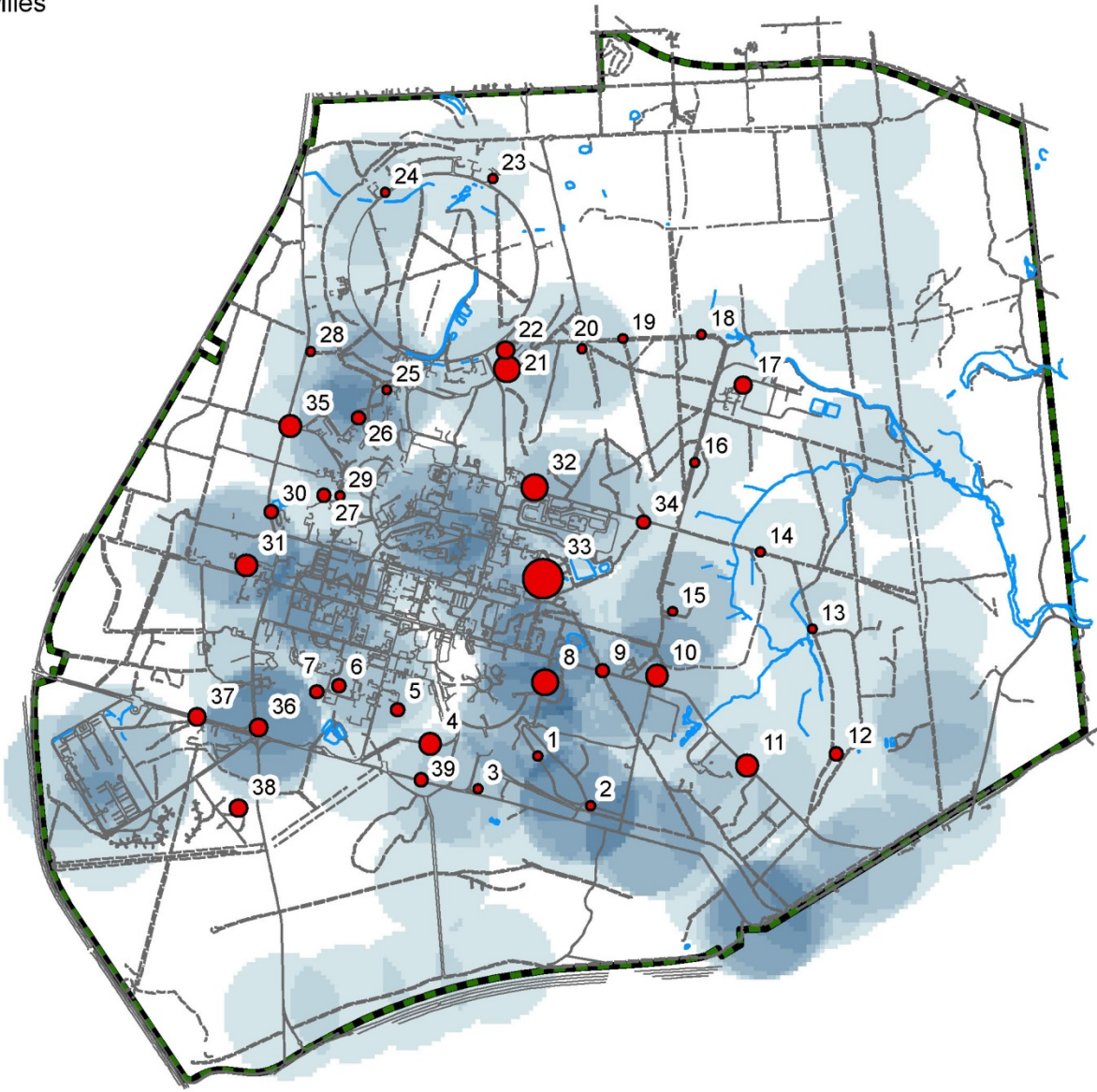
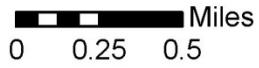
■ Testing

- 60 Batch samples taken, tested for cesium- 137
- Values ranged from non-detect to 0.89 pCi/g wet weight
- Average of all samples was 0.26 pCi/g wet weight
- NYSDOH health criteria is consumption of 65 lbs/yr at 6.9 pCi/g wet weight

■ Environmental samples

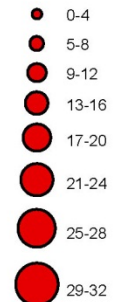
- 50 individual samples taken – being sent for analysis

SCALE



Legend

Deer



Surface Water



Deer Taken

Deer Population Reduction (next steps)

▪ March – May

- Conduct surveys that incorporate impacts of population reduction and winter mortality
- Deploy 4-Poster tick management devices

▪ June – July

- Begin documenting impacts of deer reductions
- Summer interns to conduct forest health monitoring within deer exclosures and paired forest health plots
- Assess 4-Poster effectiveness

▪ July - September

- Conduct surveys that account for reproductive effort
- Estimate population and set reduction goals
- Begin planning for November cull (preferred), March cull if delay needed

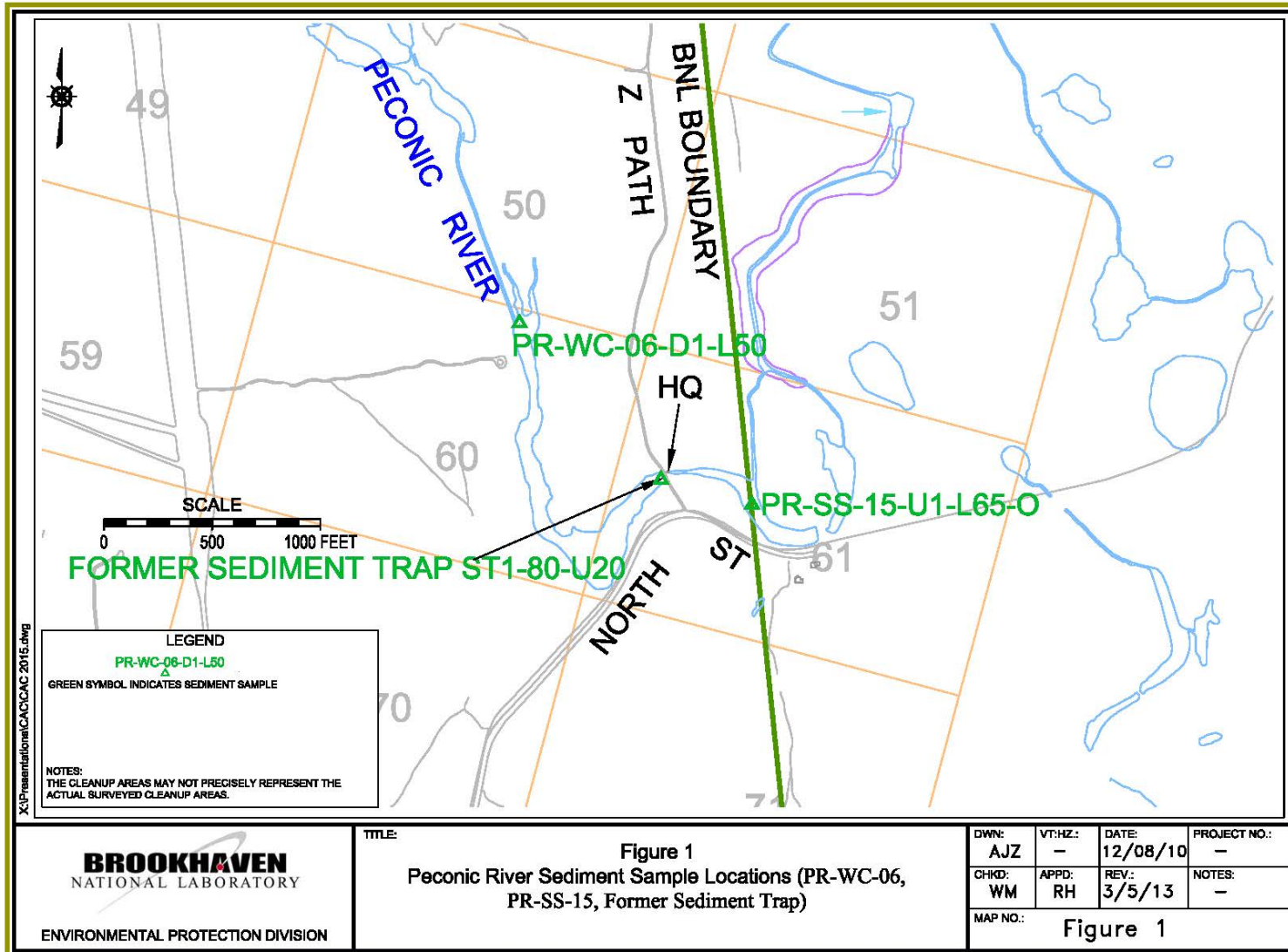
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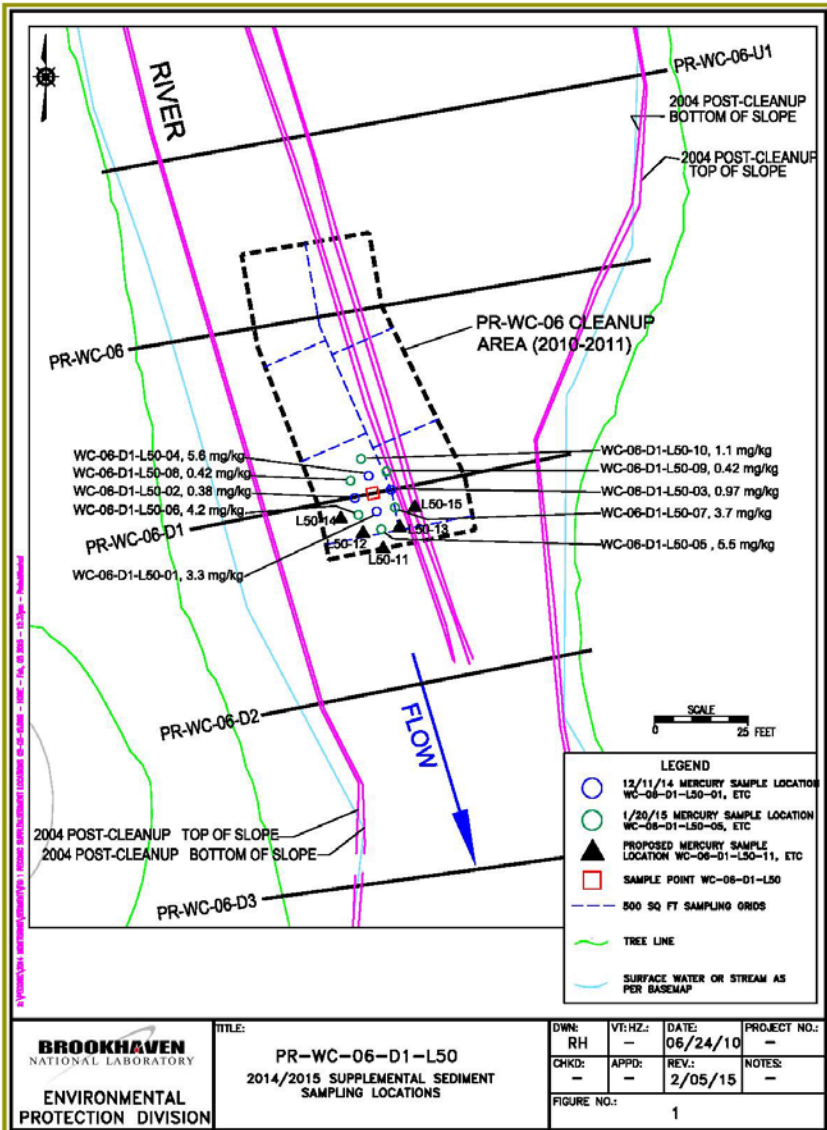
Peconic River Supplemental Sediment Sampling

- Last briefed CAC in November on status of planned sampling
- One of three on-site sediment sample locations detected elevated mercury concentration in 2014 (7.4 mg/kg at PR-WC-06-D1-L50)
- Following review of the data, a decision was made to collect additional samples to confirm that this is a localized spot, and not a large, more widespread area of contamination
- In November, the regulators agreed with plan to collect four samples (five feet upstream, five feet downstream, five feet to the left, and five feet to the right of the original sample)
- Continue this process until an average mercury concentration below 2.0 mg/kg is achieved resulting in a delineated area
- The data will continue to be reviewed with the regulators

Peconic River Sediment Sampling Locations



Peconic River Supplemental Sediment Sampling



October 2014, dry



December 2014



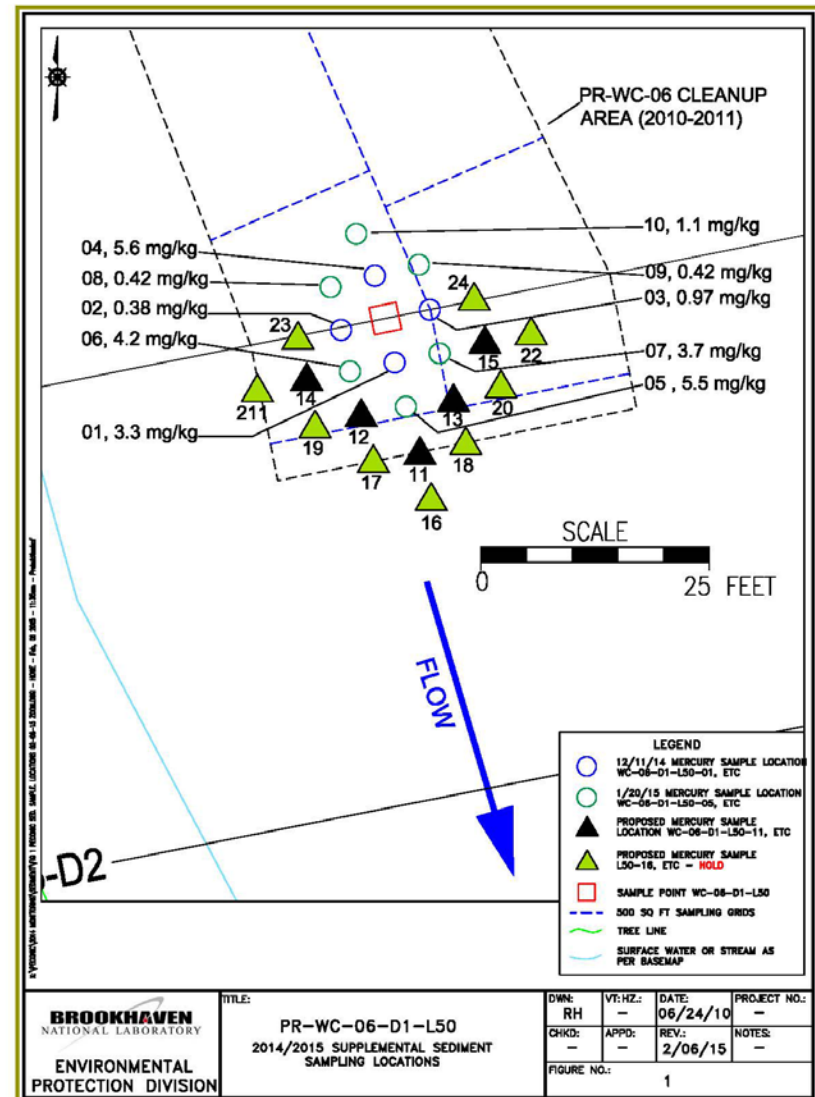
January 2015



February 2015
 sampling postponed

Peconic River Supplemental Sediment Sampling

- December 2014 – Four samples collected
 - Two above 2 mg/kg and two below 2 mg/kg of mercury
 - Average of 2.6 mg/kg
- January 2015 - Six samples collected
 - Three above 2 mg/kg and three below 2 mg/kg of mercury
 - Average of all 10 samples remains at 2.6 mg/kg
- Spring 2015 – Five additional samples planned, with another nine to be collected and stored.
 - Following the averaging of the 15 samples, the need to analyze some or all of the additional nine samples will be determined
- Continue to brief regulators on results



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FHWMF Perimeter Area Soil Cleanup

- Last of three phases of cleanup (last briefed CAC in November on cleanup completed)
- 100 cubic yards of soil were excavated to achieve levels below the cleanup goal of 23 pCi/g (Cs-137), confirmatory sampling and final status survey completed



- Oak Ridge Institute for Science and Education (ORISE) performed independent verification of data
- Closeout Report submitted to regulators for review in February
- Continue implementation of institutional controls

FHWMF Perimeter Area with Institutional Controls



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Reactor Surveillance and Maintenance Update

- BGRR - Completed replacement of 76 former office windows (including asbestos abatement) in February
- Repairs planned to HFBR north air lock and former machine shop roof once weather permits
- Safety enhancements planned to HFBR stack platforms

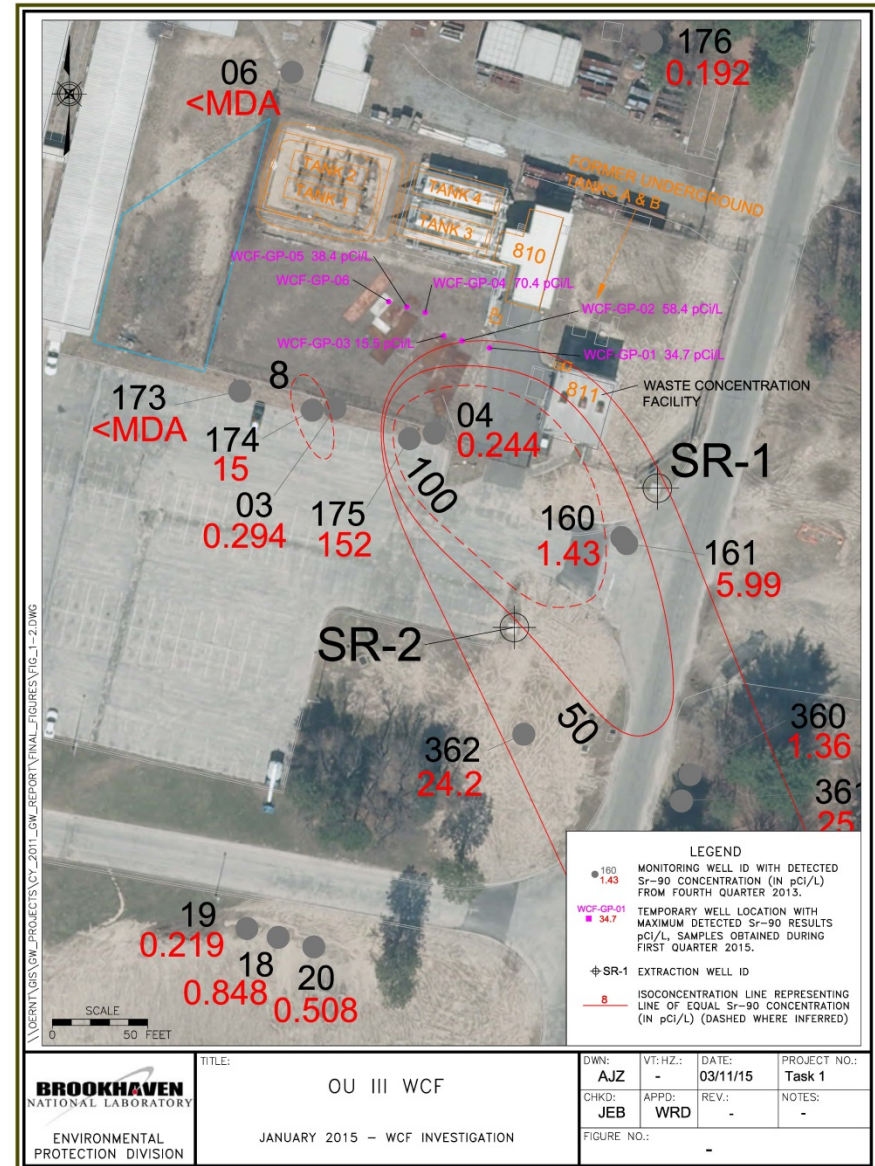


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Former Waste Concentration Facility (Building 811) Planned Demolition

- Operated from 1947 to 2008 as waste processing facility
- Help reduce environmental liability risk to soil and groundwater
- Source area groundwater characterization
- Utility isolation completed in 2014
- Planning underway for demolition and soil removal in spring 2015



QUESTIONS?