

Environmental Updates

*Brookhaven National Laboratory
Community Advisory Council Review
September 10, 2015*

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Manager
Environmental Protection Division*



Environmental Update Topics

- **Building 811 Demolition**
- **Peconic River Supplemental Sediment Sampling**
- **Former Hazardous Waste Management Facility (FHWMF) Sr-90 Groundwater Characterization**
- **Future Environmental Topics/Updates**

Former Waste Concentration Facility (Building 811) Demolition

- Operated from 1947 to 2008 as waste processing facility
- Help reduce environmental liability risk to soil and groundwater
- Groundwater remediation on-going
- Utility isolation complete in 2014
- Bldg. 810 demolished July 2015
- Bldg. 811 demolished August 2015
- Bldg. 811 foundation and soil removal underway
- Perform final radiological status survey and verification
- Load and ship waste via rail
- Prepare Completion Report



Former Waste Concentration Facility (Building 811) Demolition



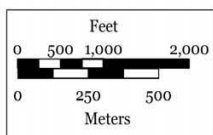
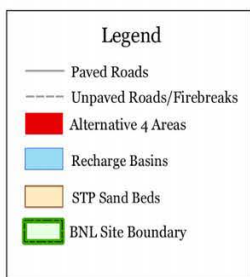
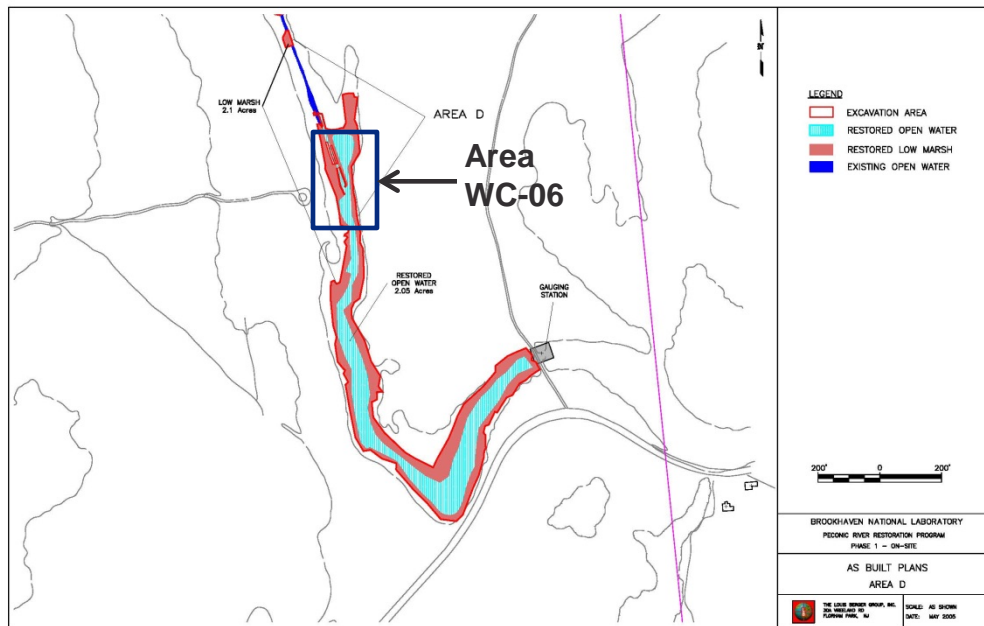
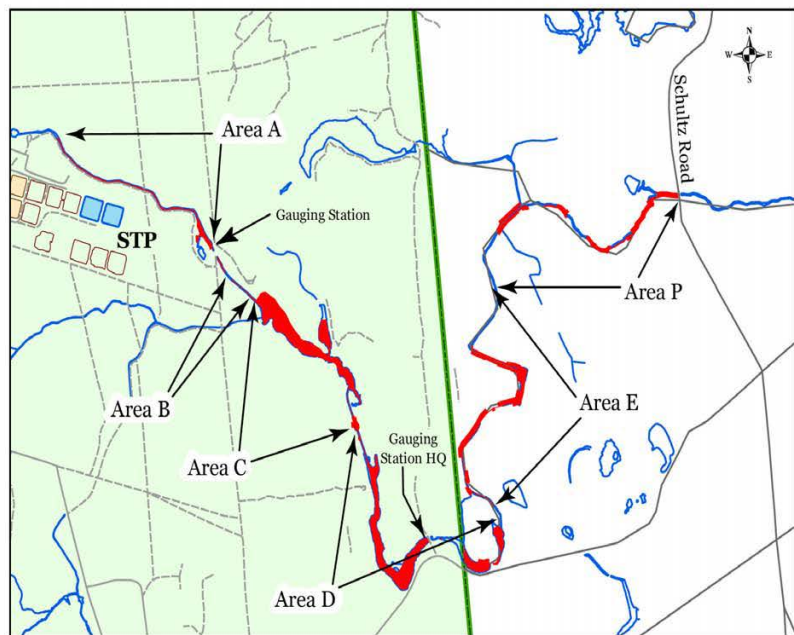
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- Upcoming Updates

Peconic River Supplemental Sediment Sampling

- Last briefed CAC in March on mercury delineation in sediment at Area WC-06 (located on BNL property)
- Since December 2014, 97 samples were collected and 91 were analyzed to delineate the extent of the elevated mercury at this area
 - Samples collected at five foot intervals (25 square foot sampling density)
- Concentrations range up to 18 mg/kg of mercury, average of all 91 samples is 2.9 mg/kg
- Next Steps
 - Complete delineation
 - Continue to review results with the regulators
 - Determine path forward
 - Provide update to the CAC

Peconic River Supplemental Sediment Sampling



BROOKHAVEN NATIONAL LABORATORY
PECONIC RIVER RESTORATION PROGRAM
PHASE 1 - ON-SITE

AS BUILT PLANS
AREA D

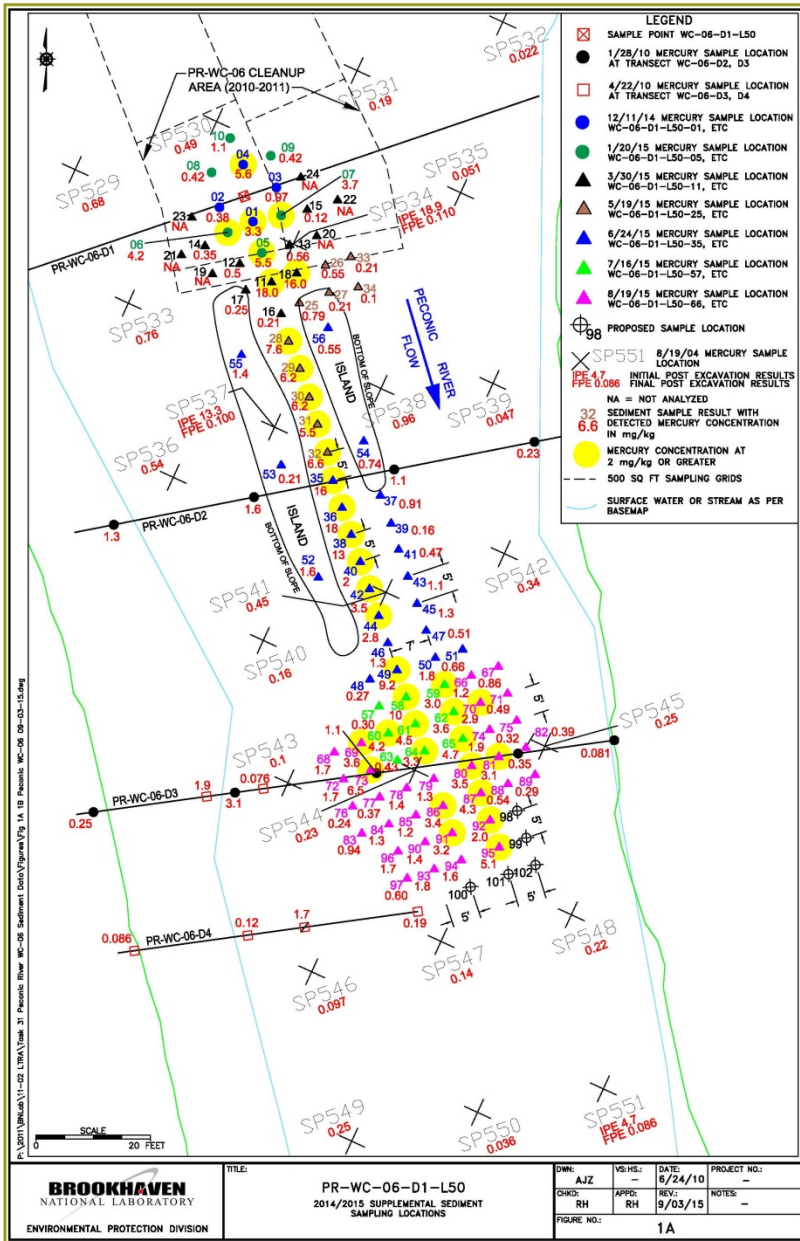
THE LECO GROUP, INC.
200 HOLLAND ST.
CLEVELAND, OH 44115

SCALE: AS SHOWN
DATE: MAY 2005

Figure B.

OU V Peconic River Cleanup Areas Between the BNL Sewage Treatment Plant and Schultz Road

Peconic River Supplemental Sediment Sampling



March 2015



May 2015



June 2015



July 2015



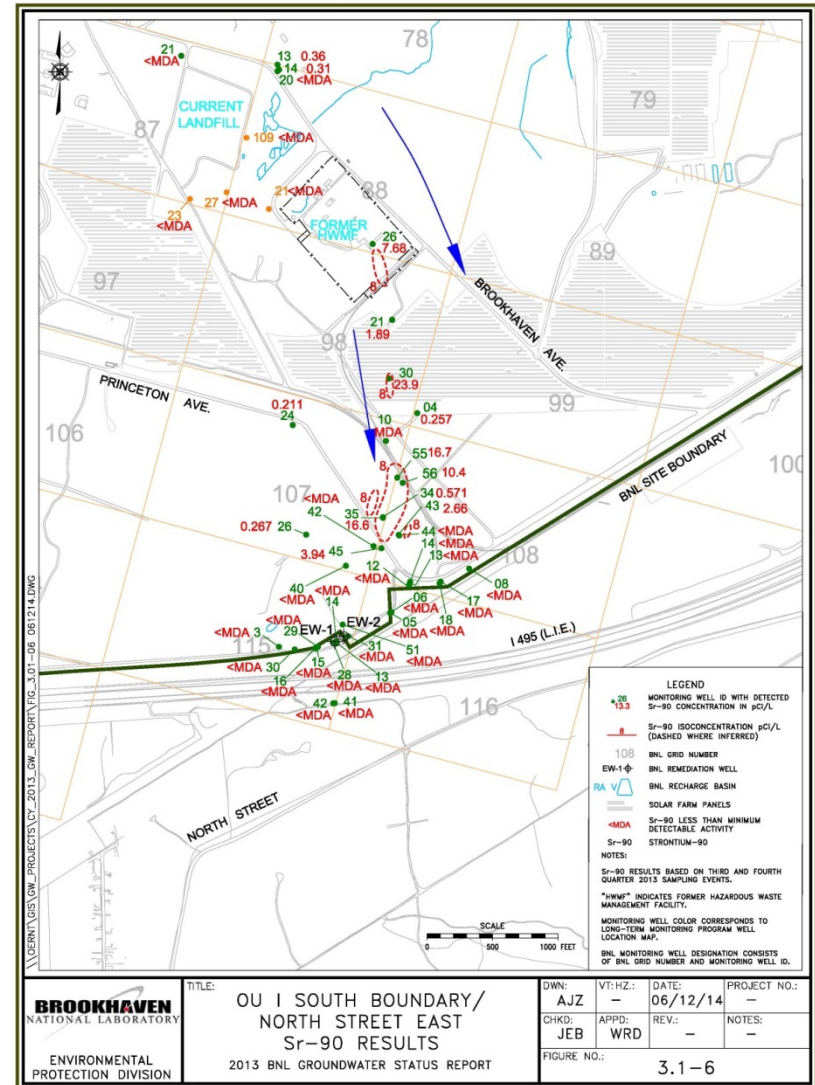
August 2015

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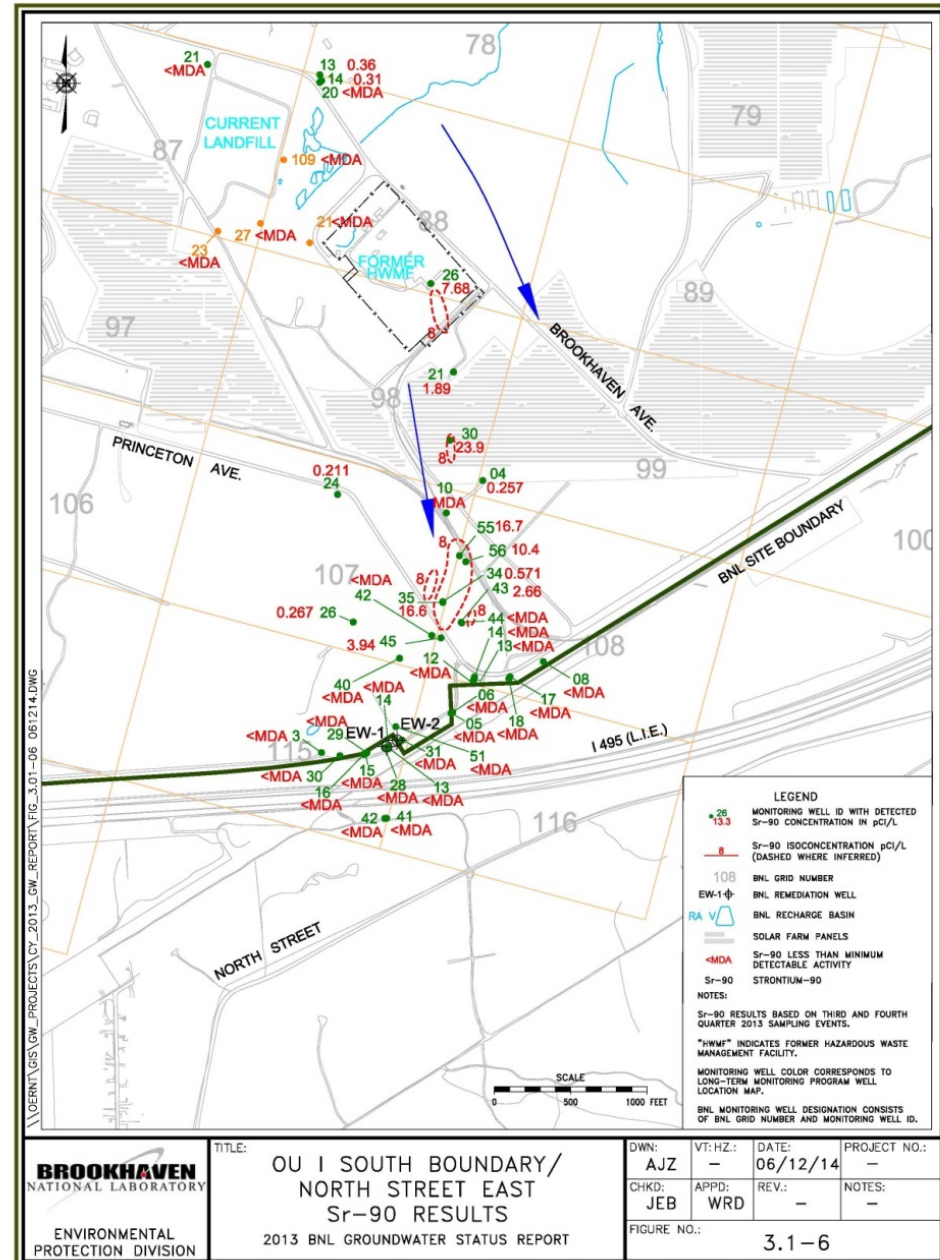
FHWMF Sr-90 Groundwater Characterization

- Soil remediation and building demolition completed in 2005
- Post cleanup groundwater monitoring ongoing
- Based on Sr-90 monitoring well concentrations ranging up to 35 pCi/L since 1997, and the concern for a potential continuing source, it was recommended in the 2013 GW Status Report to characterize Sr-90 at the downgradient perimeter of FHWMF
- Began characterizing this area in late April/May. Have seen elevated Sr-90 concentrations up to 302 pCi/L in yard.



FHWMF Sr-90 Groundwater Characterization

- Continue to define upgradient/downgradient and western extent of Sr-90 with additional characterization inside and outside yard
- This area is ~ 3,000 feet from site boundary. Sr-90 migration rate is 40-50 feet per year
- Model attenuation of Sr-90 from the former HWMF based on new groundwater data
- Brief CAC in November
- Evaluate follow up actions



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- **Future Environmental Topics/Updates**
 - Site Environmental Report (SER) and Five-Year Review (October)
 - Annual Groundwater Report (November)
 - Natural/Cultural Resources Update (including deer management) and C-AD EA (December)

CERCLA Five-Year Review

- Five-year review required when contaminants remain
 - Last review issued 2011
- Evaluate implementation and performance of remedies and whether they continue to remain protective
- October meeting will include a review of the Five-Year Review process and discussion on CAC input
- Questions posed to CAC in 2010:
 - What is your overall impression of BNL's cleanup and do you feel well informed about the cleanup activities and progress?
 - Are there any specific aspects of the cleanup that you feel should be of particular focus during the review? (e.g. ROD's, cleanup goals, community input, etc.)
 - Do you feel confident in BNL and DOE's management of the long-term cleanup operations for the site?
 - Do you have any comments, suggestions, or recommendations regarding BNL/DOE's management and communications of the cleanup?

Deer Management

- **Summer/Fall 2015**
 - **Conduct surveys that account for reproductive effort – June surveys estimated ~ 400 animals onsite showing results of both population reduction and winter mortality**
 - **Estimate population and set reduction goals – late summer surveys are currently being conducted to determine present population and set reduction goal**
 - **Begin planning for November cull (preferred), March cull if delay needed – report from February cull submitted with request of 250 tags for Fall action**
 - **Assess 4-Poster effectiveness – devices still active and results from summer showing roughly 50% reduction in ticks since start of the program**
- **Provide comprehensive update to CAC in December (as part of the 2014 Site Environmental Report highlights of Natural and Cultural Resources)**

QUESTIONS?