Stimson Cooling Pond PCB Cleanup Project

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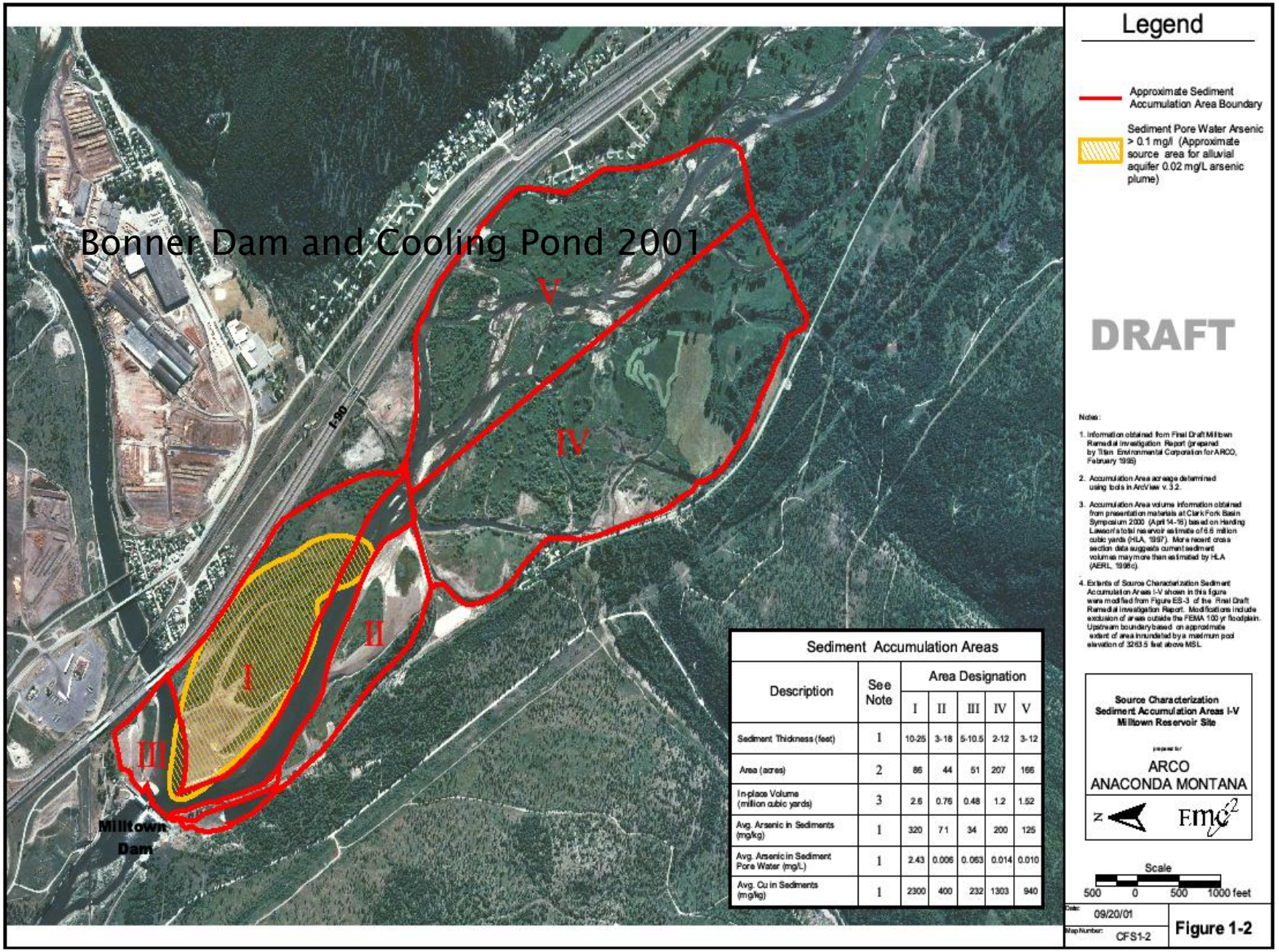
Bill Kirley – DEQ Legal

DEQ Rem. Div. Update
Nov. 12, 2014



Sediment Accumulation Areas

Description	See Note	Area Designation				
		I	II	III	IV	V
Sediment Thickness (feet)	1	10-25	3-18	5-10.5	2-12	3-12
Area (acres)	2	86	44	51	207	166
In-place Volume (million cubic yards)	3	2.6	0.76	0.48	1.2	1.52
Avg. Arsenic in Sediments (mg/kg)	1	320	71	34	200	125
Avg. Arsenic in Sediment Pore Water (mg/L)	1	2.43	0.006	0.063	0.014	0.010
Avg. Cu in Sediments (mg/kg)	1	2300	400	232	1303	940

PCB Cleanup Project
Bonner Mill – Bonner, MT

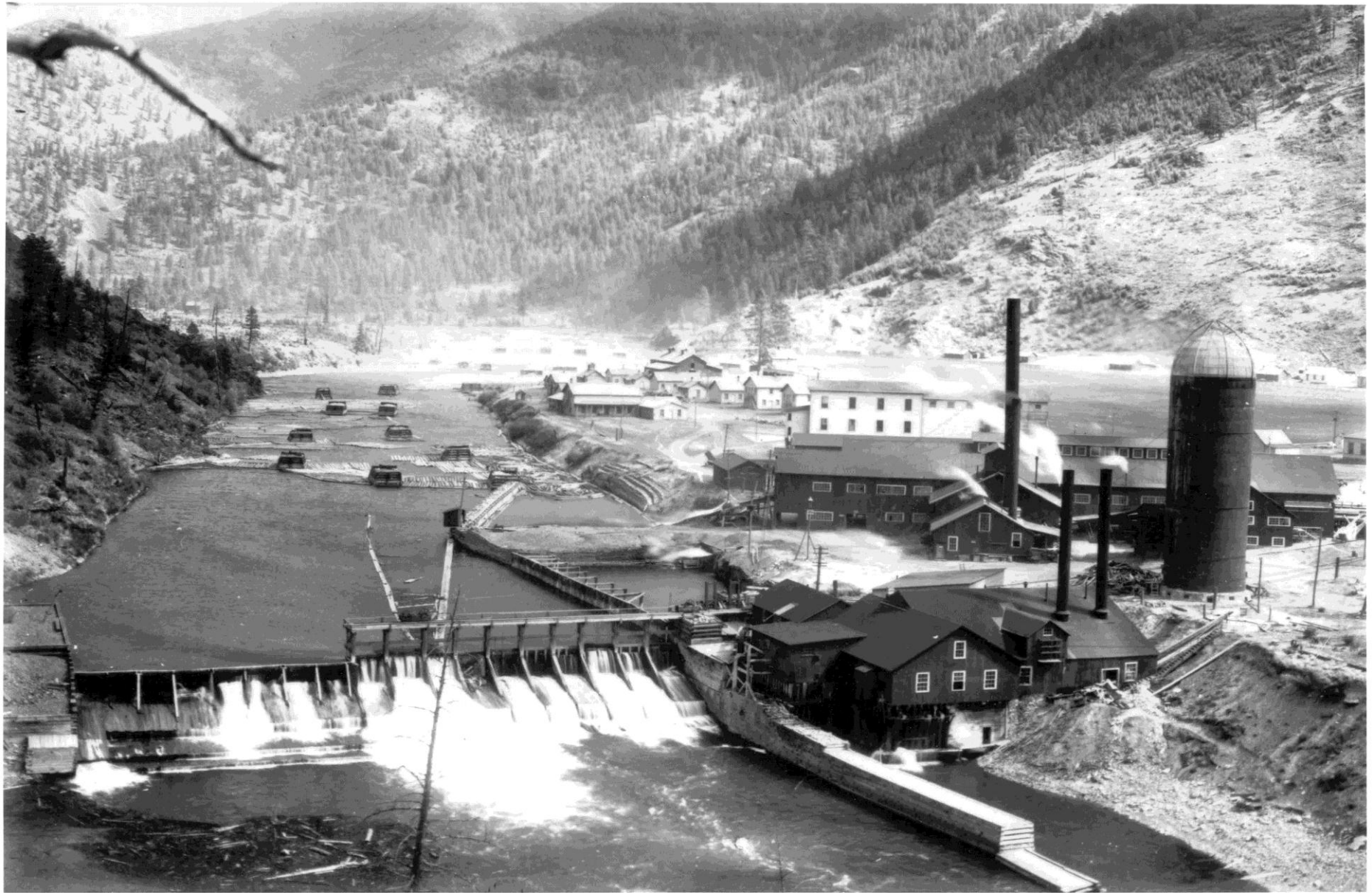
- PCB project began in January 2006
- PCBs are regulated by TSCA
- DEQ used a combination of three different authorities to justify the response action
  - MT Water Quality Act
  - CECRA
  - CERCLA

PCB Cleanup Project
Bonner Mill – Bonner, MT

- 2006 – 2008 DEQ characterized the site and drafted an EE/CA
- EE/CA public comment period Sept./Oct. 2008 (ended up being 60 days)
- DEQ Action Memo signed in October 2009
- AOC signed by DEQ and Stimson Lumber Co. in April 2010
- Construction Work Plan and 404 Permit package approved in September 2010

PCB Cleanup Project
Bonner Mill – Bonner, MT

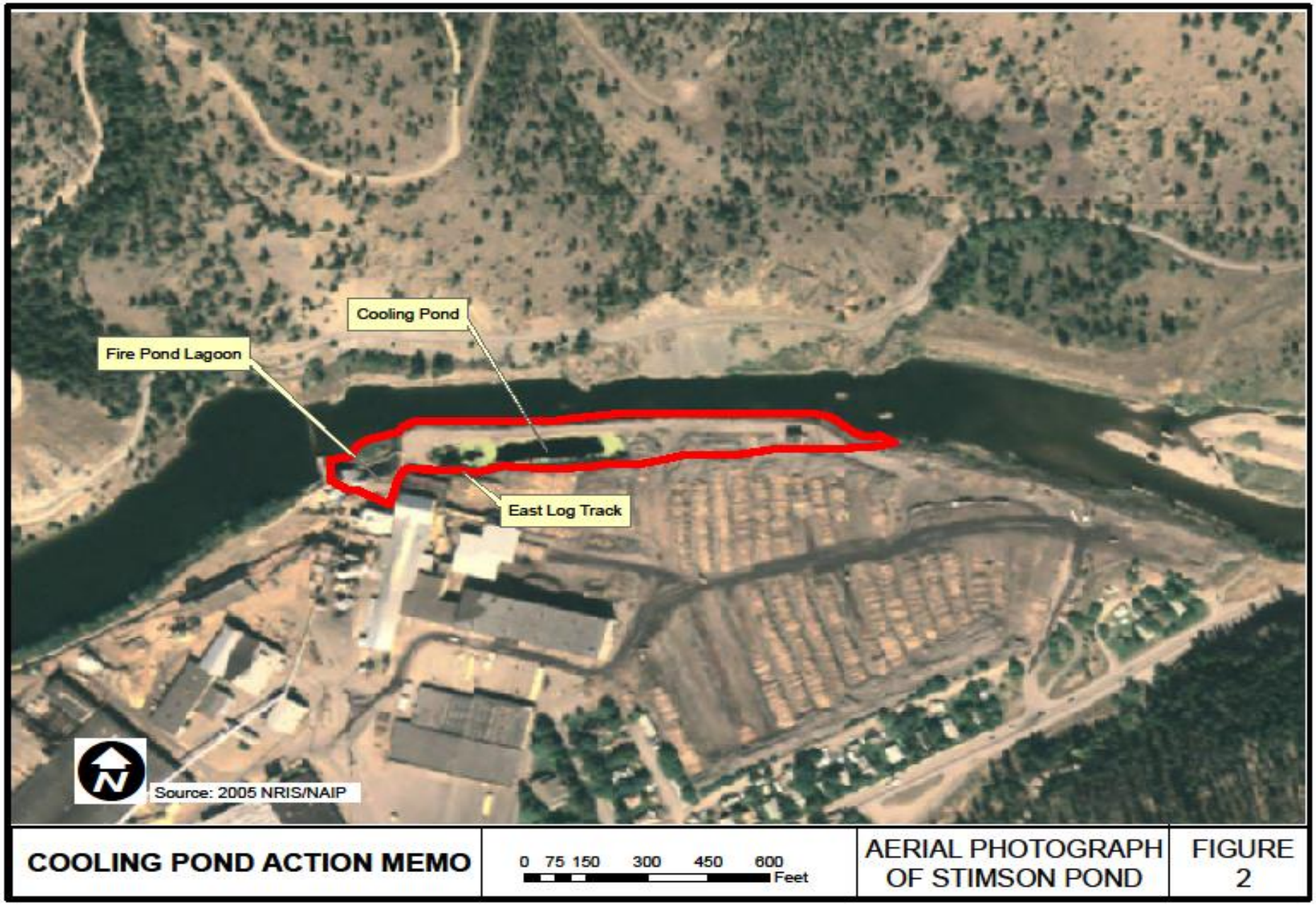
- Construction also began in September 2010
- To-date, about 100,000 cubic yards of PCB impacted soils have been removed and disposed of
- Contaminated materials have been disposed of in a;
  - permitted off-site RCRA landfill
  - the local Missoula landfill
  - or the on-site repository
- Three different construction Phases were done to complete the work to-date



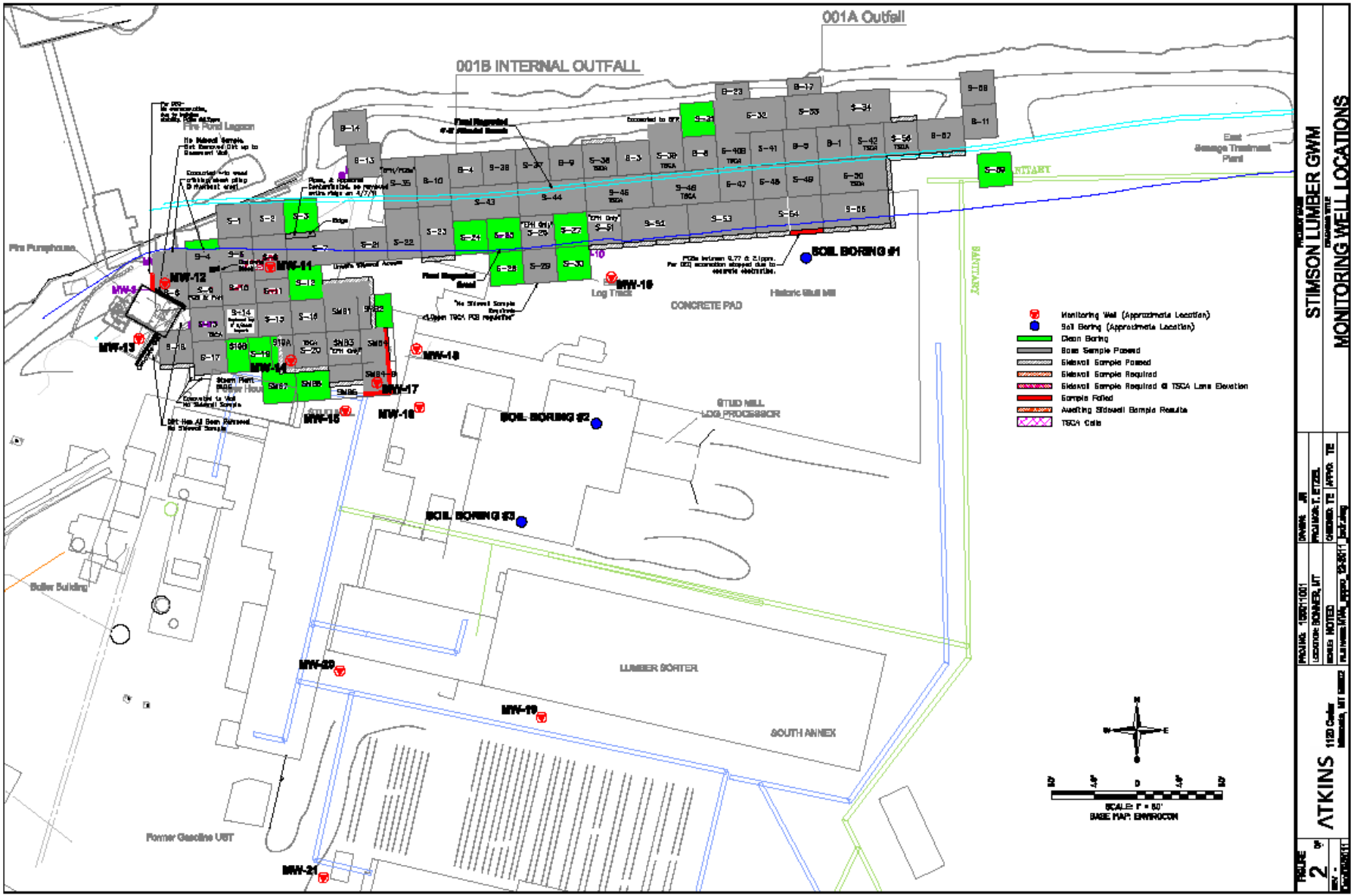
1905

2004

2005

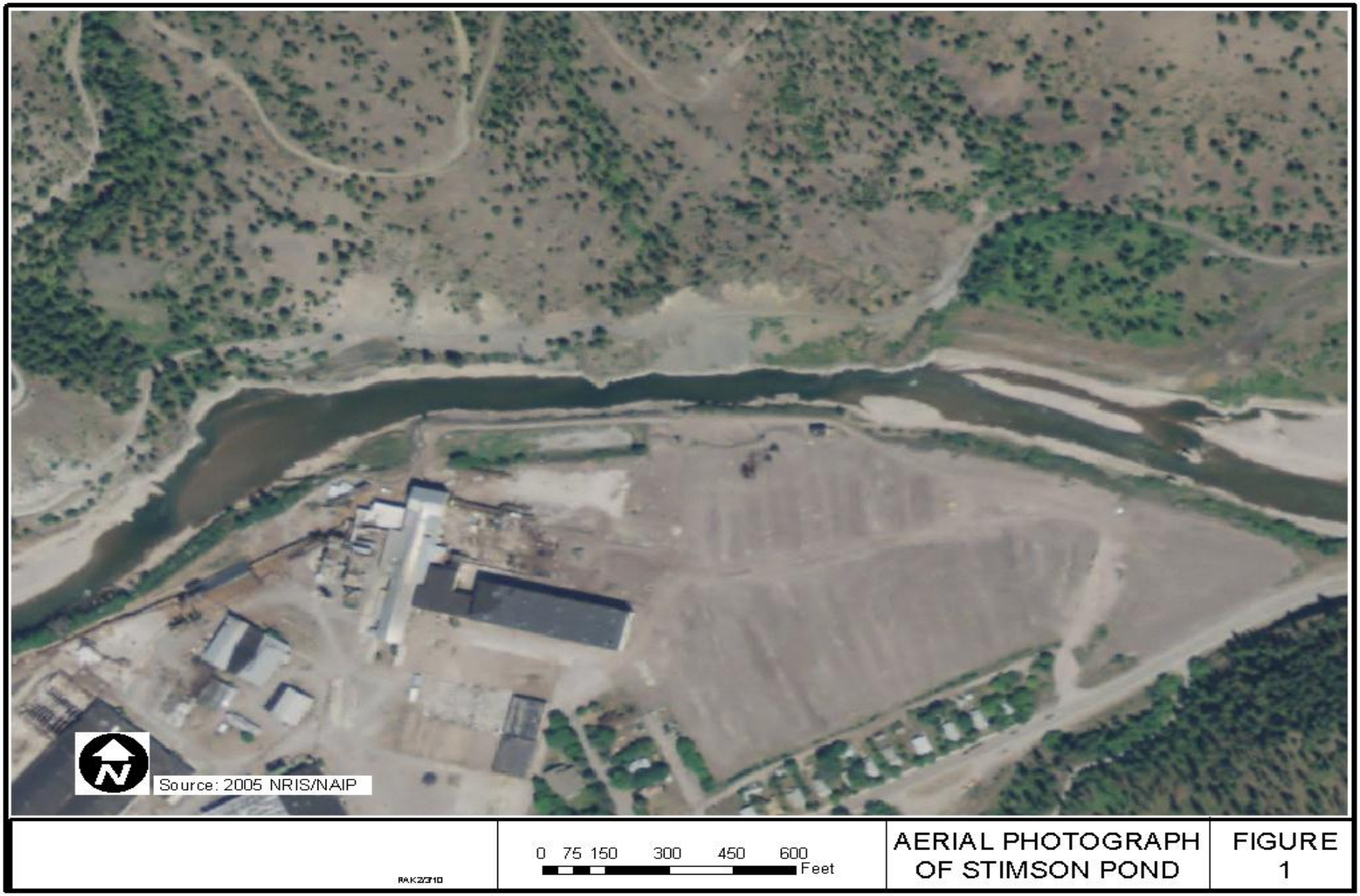

Cooling Pond
Fire Pond Lagoon
East Log Track
Source: 2005 NRIS/NAIP
COOLING POND ACTION MEMO
0 75 150 300 450 600
Feet
AERIAL PHOTOGRAPH OF STIMSON POND
FIGURE 2

2005


001A Outfall
001B INTERNAL OUTFALL
Fire Pond Lagoon
Fire Pumphouse
East Sewage Treatment Plant
SANITARY
SOIL BORING #1
SOIL BORING #2
SOIL BORING #3
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-21
Log Trace
CONCRETE PAD
Historic Mill
STUD MILL
LOG PROCESSOR
LUMBER SORTER
SOUTH ANNEX
Boiler Building
Former Gasoline UST
Monitoring Well (Approximate Location)
Soil Boring (Approximate Location)
Clean Boring
Base Sample Passed
Sidewall Sample Passed
Sidewall Sample Required
Sidewall Sample Required @ TSCA Lens Elevation
Sample Failed
Awaiting Sidewall Sample Results
TSCA Cells
SCALE: 1" = 80'
BASE MAP: ENVIROCON
STIMSON LUMBER GWM
MONITORING WELL LOCATIONS
ATKINS
FIGURE 2

Phase I Construction

- September 2010 to May 2011
- Cooling Pond Removal Action
- PCB Waste Disposal
- PCBs contaminated materials ranging from 0.22 ppm to 0.74 ppm were placed in an on-site repository
- Materials ranging from 0.75 ppm to 50 ppm went to the local landfill
- Materials above 50 ppm PCBs went to a RCRA landfill in Idaho


Source: 2005 NRIS/NAIP
0 75 150 300 450 600
Feet
RAK2/2/10
AERIAL PHOTOGRAPH OF STIMSON POND
FIGURE 1

Summer 2010

Fall 2010

January 2011

February 2011


World • United States • MT • Missoula Co.
N
250 feet
50 m
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July 2011


04.19.2012 13:59

PCB Cleanup Project
Bonner Mill – Bonner, MT

- The expanded on-site repository covers almost 3 acres
- The repository contains about 40,000 cubic yards of material – all below 10 ppm PCBs
- SPLP calculations indicate that the material won't leach if it is below 13.2 ppm PCBs
- The bottom of it is an old concrete slab foundation with a 20 foot separation between the bottom of the repository and groundwater
- The cap is a two foot thick vegetated cap made of 18" of clean material and 6" growth media
- Repository is fenced and has three down-gradient GW monitoring wells

Phase II Construction

- November 2011 to February 2012
- Rock-in-River Removal Action
- Expanded Repository Construction

Spring 2011 High Flow


11.29.2011 15:49

November 2011


11.08.2011 14:03


12.13.2011 11:37


01.10.2012 12:25


06.11.2012 15:02

Phase III Construction

- November 2013 to May 2014
- Final Bonner Dam Removal (NRD and FWP)
- MW-15 Well Area Removal Action (PTCS)
- MW-13 Well Area Removal Action


11.19.2013 10:56


KOMATSU
PC 400 LC
12.13.2013 10:40


12.18.2013 16:22


KOMATSU
PC 400 LC
CAT
01.27.2014 14:14


KOMATSU
01.29.2014 12:53


02.10.2014 12:50


02.14.2014 10:35


03.11.2014 11:55


06.24.2014 11:57


1905


2004


2012
04 19 2012 13:59


2014
06 24 2014 11:57