

Downtown revitalization

Remediation system cleaning up fuel spill

Downtowns across the country have been challenged in the last three decades by shopping malls and big box stores. Mandan's central business district has faced an additional obstacle: an underground diesel fuel spill discovered in 1985 during construction of the Morton County Law Enforcement Center.

In 2004, the State of North Dakota and City of Mandan reached a settlement with Burlington



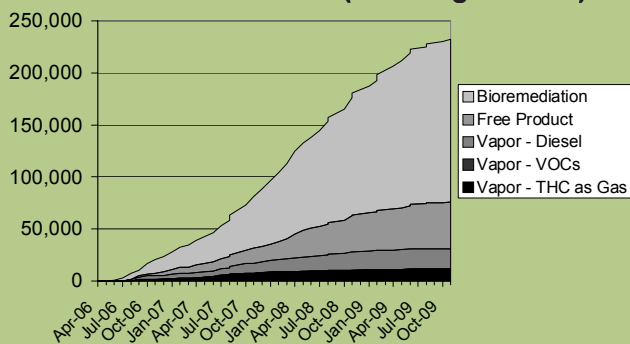
Seven remediation wells were drilled in August 2009 beneath Main Street between First and Second Avenue NW. The wells extend at a slant from south of Main to the center of the street, an area not previously reached for clean-up.

CONTAMINANT RECOVERY as of December 31, 2009

- Liquid recovery — 47,523 gallons of diesel
- Vapor recovery — 31,406 gallons of solvents, gasoline and diesel; 93,440 pounds of methane
- Bioattenuation — 157,955 gallons of diesel

TOTAL = 236,884 GALLONS (1.7 MILLION POUNDS) OF HYDROCARBONS

RECOVERY - Gallons (excluding methane)



Northern Santa Fe Railway for clean-up of the spill. Since then, a comprehensive remediation system has been constructed consisting of approximately 300 extraction wells, 22 miles of pipelines, 11 remote manifolds, and three buildings housing collection and treatment equipment.

The system draws diesel fuel, contaminated groundwater and soil vapors from portions of a six-block area. Operations began in the spring of 2006 in the area south of Main Street. Additional sections were brought on-line as constructed until it became fully operational in August 2007. The amount of hydrocarbons collected from April 2006 to December 2009 totals 1.7 million pounds, enough to fill nearly nine railcars.

Areas disrupted for the installation of the remediation system are restored. The Mandan Remediation Trust and city leaders adopted a policy of leaving things better

Remediation progress ...

2004

N.D. Health Dept. and City reach settlement with BNSF. LBG selected from 7 as environmental engineering for remediation.

2005

Remediation system south of Main St. installed. Includes 75 wells, 5 miles of pipe and main treatment facility.

2006

System installed between Main St. and First St. — 41 basement and 134 exterior wells, 10 miles of pipe, two satellite remediation buildings

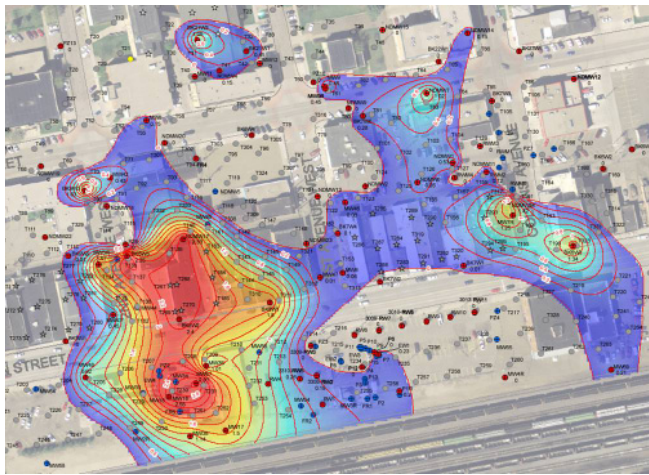
2007

System between First and Second streets installed. Includes 42 wells and 8 more miles of pipe. System becomes fully operational.

2008-09

System operates effectively and unobtrusively. Redevelopment underway.

PLUME COMPARISON: SEPTEMBER 2006 TO FOURTH QUARTER OF 2009



Product Thickness
 High : 2.91 feet
 Low : 0.00 feet

Product Thickness Contour (feet)
 0.80

Monitoring / Remedial Well Not Measured
 ●/●

Monitoring / Remedial Well Measured Product Thickness (feet)
 ●/●



The maps show the overall reduction in the extent and thickness of free phase diesel across the site. Water levels increased somewhat in 2009, which results in decreased product thickness, but remain well below levels of the mid-90s.

than they were. This included improvements and expansion of the downtown park, landscaping of public parking lots, retro-style pedestrian street lights, street kiosks, park benches, trash receptacles, greenery and intersection bulb-outs to calm traffic and make the area more pedestrian friendly.

What's ahead?

The North Dakota Health Department will develop a site closure strategy in 2010 to determine at what point portions of the remediation system can be shut down and removed. Meanwhile, redevelopment is occurring. Parties interested in investing in properties in the plume area may request a responsibility exemption and regulatory assurance by contacting the department's Environmental Health Section, phone 328-5150.

What to expect in the future ...

Next 1 to 3 years

Extraction of free product expected to decline as extent and thickness of plume is reduced. Portions of system may be shut down as areas are cleaned up.

Next 5 to 7 years

Continued soil vapor extraction and soil scrubbing. Closeout expected around 2017.

MANDAN REMEDIATION TRUST Financial Summary as of Dec. 31, 2009

Beginning balance on Aug. 27, 2004	\$24,000,000
Plus interest income	\$2,003,132
Less expenditures	\$17,035,077
Remediation	\$15,102,671
Building acquisition/demolition	1,420,646
Other	511,760
Fund balance	\$8,968,055

The Mandan Supplemental Environmental Projects Trust opened with a balance of \$2,500,000. The current balance is \$1,554,697. Expenditures have been for reconstruction amenities and upgrades beyond allowances granted by the Mandan Remediation Trust.

The BNSF Settlement Fund opened with a balance of \$1,000,000. The current balance is \$640,754.

The Mandan Remediation Trust typically meets the first Tuesday of the month at 1:30 p.m. at City Hall.