Land Quality

Environmental Cleanup

Environmental Cleanup Site Information (ECSI) Database
Site Summary Report - Details for Site ID 100, Burlington Northern Railroad Lake Yard

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This report contains site details, organized into the following sections: 1) Site Photos (appears only if the site has photos); 2) General Site Information; 3) Site Characteristics; 4) Substance Contamination Information; 5) Investigative, Remedial and Administrative Actions; and 6) Site Environmental Controls (i.e., institutional or engineering controls; appears only if DEQ has applied one or more such controls to the site). A key to certain acronyms and terms used in the report appears at the bottom of the page.

Note: DEQ may have posted online documents related to this site. If so, they would be available for viewing or downloading on ECSI Summary Page

Go to DEQ's Facility Profiler to see a site map as well is information on what other DEQ programs may be active at this site.

General Site Information

Site ID: 100	Site Name: Burlington Northern Railroad Lake Yard	CERCLIS No:
Address:	3500/3930 NW Yeon Portland 97210	
	County: Multnomah	Region: Northwest
Other location information:	Guild Lake Railyard, BNSF HUB Center, and Willbridge Railyard in Portland's Northwest Industrial Area, between NW Yeon Ave and NW Front Ave., from about NW 26th Ave to about NW Kittridge. 17 Tax Lots (142.03 ac.), including Tax Lot 300 of Sec. 19B, Tax Lots 1900 and 2000 of Sec 19A, Tax Lots 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, and 1100 of Sec 19Da, and Tax Lots 1200, 1300, and 1400 of Sec 20 (Township 1 North, Range 1 West).	
Investigation Status:	Listed on CRL or Inventory	
	Brownfield Site: No NPL Site: No	Orphan Site: No Study Area: No
Property:	Twnshp/Range/Sect: 1N , 1E , 20	Tax Lots: 17 separate Tax Lots
	Latitude: 45.5486 deg. Longitude: -122.7109 deg.	Site Size: 142.03 acres
Other Site Names:	BNSF Guilds Lake Railyard Kleen Blast Abrasives Lake Yard Portland Terminal Railroad Co. - Guilds Lake Yard Portland Harbor Sediment Study Burlington Northern Santa Fe	

Site Characteristics

General Site	An approximate 142-acre site comprised of the Burlington Northern Hub Center and

Description:	Portland Terminal Railroad's Guilds Lake Railyard located between NW Yeon and NW Front Avenues in Portland's Northwest Industrial Area.
Site History:	
Contamination Information:	The site was added to ECSI because of a 1985 removal of oily sediments from a former unnamed creek that crossed the site. The sediments contained relatively low levels of oil & grease, methylene chloride, phenol, trichlorophenol, l-nitrophenol, and leachable barium and lead. The creek was later directed to an underground culvert, but there is no indication of the extent to which sediments were contaminated, where dredged sediments were stored, or how they were disposed of. Approximately 23 crushed drums of solidified paint were also excavated from another location on the railyard at about the same time. Liquid in the drums qualified the material as a hazardous waste based on leachable chromium and lead content, ignitability, and phenol content. There is no data to indicate the location of drum removal, or if soils contained residual contamination. An underground mineral spirits pipeline leaked at a parcel that McCloskey Varnish leased from the railroad in November 1985. About 3 cubic yards of visually contaminated soil were removed, but follow-up sampling in September 1986 indicated that subsurface soils still contained benzene and methylene chloride above EPA Region 9 Industrial Soil PRGs, along with lower levels of other BTEX and petroleum constituents, PCE, acetone, MEK, and phthalates. Shallow soils in an area that Kleen Blast leases from the railroad contain concentrations of antimony, arsenic, cadmium, chromium, copper, lead, nickel, selenium, zinc, and organotins that appear to be higher than regional background levels, although only arsenic exceeds EPA Region 9 Industrial Soil PRGs. Stormwater from BNSF, PTRR, and the parcel leased to Eastman Chemical (former McCloskey leased parcel) has had concentrations of oil & grease, copper, lead, mercury, and zinc exceeding Water Quality Permit levels, along with elevated levels of COD and TOC. Contaminants in stormwater are similar to those in site soils, and to contaminants in Willamette River sediments at City Stormwater Outfalls #18 and #17. The parcel that McCloskey leased from the railroad was also used for storing hazardous waste prior to 1986. Prior to 1986, parcel runoff was directed to on-site drywells and an on-site French drain system. Samples of ponded stormwater at the parcel, and water within a catch basin on the parcel, contained low levels of benzene, toluene, TCE, phenol, and petroleum in 1986. There is no indication that the drywells and French drain system have ever been investigated. About 5,000 cubic yards of petroleum contaminated soil were excavated from a former locomotive-fueling area in 1994-95 (LUST #26-91-0441) and bioremediated at the site. Soils in the excavation pit contained up to 16,000 ppm diesel fuel. Apparent antifreeze was observed seeping into the excavation pit at the time; it was not analyzed, and no source was determined. The bioremediated soils were landfilled on-site, after remediation was confirmed by diesel fuel analyses. Later analyses indicated that oil was also present in the excavation pit. PCB 1260 was also detected in the subsurface at a low concentration. Several pockets of subsurface soil with up to 16,000 ppm diesel fuel and 4400 ppm oil remain at the excavation site. Excavated soils may not have been adequately remediated or tested. Wastes were historically burned along a drainage ditch on the northwestern end of the railyard. The burning activities likely produced PAHs that could have entered the river via the drainage ditch. Site garbage was also accumulated at two other railyard locations that have not been examined. Cleanout of railcars containing potential hazardous substances could have occurred, or possibly led to railcar waste burial, in these areas. Additional investigation should probably be conducted at several historic on-site operating areas, as well as spill locations such as a July 1992 hydraulic oil release to storm-sewer catch basins, a December 1994 toluene release location, and an October 1987 sodium cyanide cleanup area.
Manner and Time of Release:	Historic spills, current and past operating practices, past tank and pipeline releases, some off-site contributions, Time of release: historic and ongoing, most specific dates unclear.
Hazardous Substances/Waste Types:	Petroleum constituents (diesel fuel, oil, oil & grease, benzene, toluene, PAHs), phenol, trichlorophenol, 2-nitrophenol, TCE, PCE, methylene chloride, PCBs, phthalates, metals (antimony, arsenic, cadmium, chromium, copper, mercury, selenium, zinc), acetone, MEK, and possible sodium cyanide, ethylene glycol, and

creosote constituents.

Pathways: Potential health threat for on-site workers and utility trench workers: surface contact; inhalation; incidental ingestion. Possible discharge of contaminated surface runoff to city storm sewers (and then to the river). Potential groundwater contamination that could discharge directly to the river or to underground storm sewer lines. Site contaminants reaching the river could have contributed to Portland Harbor sediment contamination, or could exacerbate existing Harbor sediment contamination. Contaminated groundwater could also reach two nearby Hercules Powder Company industrial wells.

Environmental/Health Threats: Contaminated stormwater currently discharges to the river via city storm sewers. Surface contaminants could run off to city storm sewers that discharge to Portland Harbor. Subsurface soil contaminants could contaminate groundwater, which could discharge directly to Portland Harbor, or to subsurface storm sewers that discharge to the Harbor. Historic releases to the river could have contributed to Portland Harbor sediment contamination. Ongoing releases could exacerbate existing Harbor sediment contamination. Site surface contaminants could pose risks to on-site workers through direct contact, inhalation, or incidental ingestion. Subsurface contaminants could pose a threat to on-site utility trench workers through direct contact, inhalation, or incidental ingestion.

Status of Investigative or Remedial Action: Contractors excavated contaminated on-site creek sediments, relocated the sediments on-site, and may have disposed of the sediments off-site, although full extent of the creek sediment contamination may not have been adequately defined. Using visual cues, subsurface mineral-spirits contamination at the McCloskey-leased parcel was excavated, but residual contamination remains, and the full extent of contamination has evidently not been defined. A soil sample was collected beneath a leaking toluene tankcar in December 1994, although the full extent of potential soil contamination may not have been adequately determined. Buried drums of solidified paint waste were excavated and disposed of in 1985, although residual soil contamination may not have been adequately defined. In October 1987, sodium-cyanide cleanup wastes were disposed of, although any residual soil contamination has not been described or defined. Approximately 5,000 cubic yards of petroleum-contaminated soil were excavated from a former locomotive-refueling area and bioremediated at the site in 1995-96, although the bioremediation may not have been adequate, and additional petroleum-contaminated subsurface soils were left in place.

(10/9/09 LGarner/VCP) Pre-RI investigation accomplished and a Source Control Work Plan has been submitted to DEQ.

Data Sources: Correspondence from owner and/or operator; lab results. PTRR response to a December 2000 Site Assessment Site Information Request; LUST File #26-91-0441 (Portland Railroad Company); Water Quality Permit files for BNSF, PTRR, and Eastman Chemical/McWhorter Technologies/McCloskey Varnish, and Texaco Bulk Terminal; Hazardous Waste files for BNSF Hub Center, and McWhorter Technologies; DEQ ECSI Files for Texaco Portland Bulk Terminal (ECSI #169), Texaco Product Pipeline (ECSI #2117), and McWhorter, Inc (ECSI #135); DEQ Spill Files (EMD #92-0957 and #94-2069).

Substance Contamination Information

Substance	Media Contaminated	Concentration Level	Date Recorded
ACETONE	Sediment	In sediments from unnamed creek	9/8/1986
ACETONE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
ANTHRACENE	Groundwater	In ponded groundwater from LUST excavation pit	8/9/1994
ANTIMONY	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
ARSENIC	Other	In stormwater from PTRR Lake Yard	12/1/1997
ARSENIC	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
BARIUM	Sediment	EPTOX barium in sediments dredged from unnamed creek.	11/21/1985

BARIUM	Soil	As TCLP barium in subsurface soils at LUST cleanup site	8/1/1991
BENZENE	Other	Stormwater ponded next to catch basin, McCloskey lease area	6/2/1986
BENZENE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
BIS(2-ETHYLHEXYL)PHTHALATE	Other	In stormwater from McWhorter lease area	5/1/1994
BIS(2-ETHYLHEXYL)PHTHALATE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
CADMIUM	Other	In stormwater, BNSF Hub Center	10/1/1997
CADMIUM	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
CHLOROFORM	Other	In stormwater from McWhorter lease area	5/1/1997
CHLOROFORM	Soil	Surface soils at McCloskey lease area	6/2/1986
CHROMIUM	Other	In stormwater from PTRR Lake Yard	12/1/1997
CHROMIUM	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
COPPER	Other	In stormwater from PTRR Lake Yard	12/1/1997
COPPER	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
DIESEL - FUEL OIL	Soil	Subsurface soils at LUST cleanup site	7/1/1994
DIMETHYLPHENOL,2,4-	Other	In stormwater from McWhorter lease area	4/1/1995
DI-n-BUTYL PHTHALATE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
ETHYLBENZENE	Other	In stormwater from McWhorter lease area	5/1/1997
ETHYLBENZENE	Soil	In subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/10/1986
HEXACHLOROBUTADIENE	Soil	Subsurface soils at LUST cleanup site	5/21/2001
ISOPHORONE	Other	In stormwater from McCloskey lease area	11/1/1994
LEAD	Other	In stormwater from PTRR Lake Yard	12/1/1997
LEAD	Sediment	EPTOX lead in sediments dredged from unnamed creek	11/21/1985
LEAD	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
MERCURY	Other	In stormwater from PTRR Lake Yard	6/1/1997
MERCURY	Soil	Shallow soils in railyard background sampling location `	8/1/2000
METHYL ETHYL KETONE	Sediment	In sediments from unnamed creek	9/8/1986
METHYL ETHYL KETONE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
METHYLENE CHLORIDE	Sediment	In sediments from unnamed creek; also at 0.74 ppm in sediments dredged from creek.	11/21/1985
METHYLENE CHLORIDE	Soil	Subsurface soils at mineral spirits pipeline release, also in surface soils at 3.4 ppm - McCloskey lease area	6/2/1986
NAPHTHALENE	Other	Stormwater from McWhorter lease area	5/1/1994
NAPHTHALENE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
NICKEL	Other	In stormwater from PTRR Lake Yard	12/1/1997
NITROPHENOL,2-	Sediment	In sediments dredged from unnamed creek.	11/21/1985
OIL - LUBRICATING	Sediment	In sediments dredged from unnamed creek (range 11.23 - 11.50 ppm; dupl analy)	11/21/1985
OIL - LUBRICATING	Soil	Soils remaining at LUST cleanup site	5/21/2001
OIL OR FUEL RELATED COMPOUNDS	Other	Oil & Grease in Stormwater - Hub Center	10/1/1997
PCB 1260	Soil	In subsurface soils at LUST cleanup area	8/1/1991

PHENOL	Other	In stormwater from McWhorter lease area	5/1/1994
PHENOL	Sediment	In sediments dredged from unnamed creek.	11/21/1985
PHENOL	Surface Water	Water within catch basin - McCloskey lease area	6/2/1986
SELENIUM	Soil	Shallow soils at Kleen Blast operating area	8/1/2000
TETRACHLOROETHYLENE	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
TOLUENE	Other	Stormwater from McWhorter lease area	5/1/1994
TOLUENE	Sediment	In sediments from unnamed creek	9/8/1986
TOLUENE	Soil	In subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/10/1986
TOLUENE	Surface Water	Water within catch basin, McCloskey lease area	6/2/1985
TOTAL PETROLEUM HYDROCARBONS (TPH)	Groundwater	In ponded groundwater from LUST cleanup pit	8/9/1994
TRIBUTYLTIN	Soil	Shallow soils at Kleen Blast operating area Total Organotins: 0.268 ppm	8/1/2000
TRICHLOROETHYLENE	Other	Ponded stormwater next to catch basin, McCloskey lease area	6/2/1986
TRICHLOROETHYLENE	Surface Water	Water within catch basin, McCloskey lease area	6/2/1986
TRICHLOROPHENOL,2,4,6-	Sediment	In sediments dredged from unnamed creek	11/21/1985
TRIMETHYLBENZENEs	Soil	Subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/8/1986
XYLENEs	Soil	In subsurface soils at mineral spirits pipeline release - McCloskey lease area	9/10/1986
ZINC	Other	In stormwater from BNSF Hub Center	10/1/1997
ZINC	Soil	Shallow soils at Kleen Blast operating area	8/1/2000

Investigative, Remedial and Administrative Actions

Action	Start Date	Compl. Date	Resp. Staff	Lead Pgm
Source Control Decision (Primary Action)	10/09/2009		James Orr	VCP

Key to Certain Acronyms and Terms in this Report:

CERCLIS No.: The U.S. EPA's Hazardous Waste Site identification number, shown only if EPA has been involved at the site.
Region: DEQ divides the state into three regions, Eastern, Northwest, and Western; the regional office shown is responsible for site investigation/cleanup.
NPL Site: Is this site on EPA's National Priority List (i.e., a federal Superfund site)? (Y/N).
Orphan Site: Has DEQ's Orphan Program been active at this site? (Y/N). The Orphan Program uses state funds to clean up high-priority sites where owners and operators responsible for the contamination are absent, or are unable or unwilling to use their own resources for cleanup.
Study Area: Is this site a Study Area? (Y/N). Study Areas are groupings of individual ECSI sites that may be contributing to a larger, area-wide problem. ECSI assigns unique Site ID numbers to both individual sites and to Study Areas.
Pathways: A description of human or environmental resources that site contamination could affect.
Lead Pgm: This column refers to the Cleanup Program affiliation of the DEQ employee responsible for the action shown. SAS or SAP = Site Assessment; VCS or VCP = Voluntary Cleanup; ICP = Independent Cleanup; SRS or SRP = Site Response (enforcement cleanup); ORP = Orphan Program.

You may be able to obtain more information about this site by contacting James Orr at the Northwest regional office or via email at orr.jim@deq.state.or.us. If this does not work, you may contact Gil Wistar at (503) 229-5512, or via email at wistar.gil@deq.state.or.us or contact the Northwest regional office.

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For more information about **ECSI** call Gil Wistar at 503-229-5512 or email.

For more information about **DEQ's Land Quality programs**, visit the DEQ contact page.

Oregon Department of Environmental Quality
Headquarters: 811 SW Sixth Ave., Portland, OR 97204-1390

Phone: 503-229-5696 or toll free in Oregon 1-800-452-4011
Oregon Telecommunications Relay Service: 1-800-735-2900 FAX: 503-229-6124

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