



CITY OF PORTLAND ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ■ Dan Saltzman, Commissioner ■ Dean Marriott, Director

December 13, 2011

Alex Liverman
Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987

Subject: Request for DEQ Site Assessment of Peninsula Iron Works Property at 6618 N. Alta Avenue

Dear Alex:

The City has completed a source investigation in Basin 52 as part of the City's ongoing Remedial Investigation associated with the Portland Harbor City of Portland Outfalls Project, being conducted pursuant to the August 13, 2003 Intergovernmental Agreement (IGA) between the Oregon Department of Environmental Quality (DEQ) and the City Bureau of Environmental Services (BES). In response to a preliminary review of stormwater data collected from Basin 52 in 2007¹, the City conducted an inline solids investigation in the basin between 2008 and 2010 to identify potential sources of polychlorinated biphenyls (PCBs) to Basin 52. Inline solids results indicated the presence of a previously unidentified source within the basin, which lead to a targeted investigation of erodible and subsurface soils in areas adjacent to the suspected source. These data indicate that contaminated erodible soils in the vicinity of the Peninsula Iron Works facility at 6618 N. Alta Avenue are a major current source to the basin. Offsite migration of contaminants from Peninsula Iron Works operations may have resulted in observed contamination in the adjacent rights-of-way and City property.

Peninsula Iron Works (PIW) is located adjacent to Cathedral Park (see Attachment 1). It is bounded on the west by the unimproved North Bradford Street right-of-way and UPRR rail line, to the north by N. Alta Ave., to the east by N. Crawford St., and to the south by a parking area owned by the City of Portland Bureau of Parks and Recreation.

City Source Investigation²

In 2008, the City collected a sediment sample from a catch basin (CB ANE911) located at the northwest corner of the facility (see Attachment 1). The total PCBs concentration in the sample exceeded 8,000 µg/Kg. Following the receipt of this result, the City completed a number of additional source investigation and control activities in the vicinity of the site to define the suspected source area. Activities are summarized as follows:

¹ *Stormwater Evaluation Report, City of Portland Outfall Project, ECSI No. 2425.* Prepared by the City of Portland, Bureau of Environmental Services, Portland Harbor Program. February 2010.

² *Basin 52 Source Investigation Data.* Transmittal from Linda Scheffler (BES) to Karen Tarnow (DEQ). June 16, 2011.

- January 2010: cleaned CB ANE911, the lateral line from the catch basin to the main storm line on N. Alta Ave., the storm line segment downstream of the catch basin lateral connection, and the storm line extending along the rail corridor northwest of the PIW facility.
- February – June 2010: deployed an inline sediment trap in a Basin 52 storm line segment downstream of the lateral connection from CB ANE911 and collected and analyzed trapped solids.
- September 2010: collected and analyzed sediment from CB ANE911.
- January 2011: collected and analyzed erodible soils from the N. Bradford St. right-of-way in the vicinity of the site.
- September 2011: collected and analyzed subsurface soil samples from the parking lot adjacent to the south side of the site and erodible soil samples from Cathedral Park pedestrian areas in the vicinity of the site.

Attachment 1 includes a figure depicting sample locations and total PCBs concentrations for these investigations and a table summarizing analytical results. Data indicate that the PIW site is a likely current and/or historical source of PCBs detected in the Basin 52 conveyance system, in the N. Bradford St. right-of-way, and on adjacent City property.

Data Evaluation

In September 2008, total PCB Aroclors were detected in CB ANE911 at a concentration of 8,160 µg/Kg. Following the January 2010 line cleaning activities in Basin 52, total PCB congeners were detected at a concentration of 924 µg/Kg in the downstream manhole AAE513 sediment trap sample (June 2010), indicating a PCBs source (see Attachment 1)³. Because this sampling location represents discharge from the majority of the northern Basin 52 drainage area, the City also resampled sediments that had accumulated in CB ANE911 since the January 2010 cleanout. The catch basin data (September 2010) were used to evaluate whether contaminant concentrations in sediments indicates a current source, and if so, whether that source likely represents the most significant source to the manhole AAE513 sediment trap location. Total PCB congeners in the follow up sample from CB ANE911 were 2,350 µg/Kg. These data indicate the presence of a PCBs source within the CB ANE911 drainage area.

There are no piped connections to CB ANE911. Runoff from the PIW site and other areas, such as N. Alta and N. Bradford Streets, discharges to this inlet. To determine the source of contaminated sediment to CB ANE911, the City sampled erodible soils in the vicinity of the catch basin in January 2011 (see Attachment 1). Total PCBs concentrations were highest along the N. Bradford St. right-of-way closest to the site (~7,000 to 21,000 µg/Kg). These concentrations also exceeded the concentration detected in CB ANE911. PCB Aroclor 1260 was the only Aroclor detected in CB ANE911 and all erodible soils samples. Results indicate that contaminated erodible soils in the vicinity of PIW and N. Bradford St. are a significant source to CB ANE911.

³ An additional concurrent sediment trap sample was collected in Basin 52 upstream of this location and the PIW site; Total PCBs were detected at 20-55 µg/Kg.

In September 2011, the City advanced five borings in the parking lot adjacent to the south side of the PIW building. The City acquired this property from Multnomah County in the early 1970s for the creation of Cathedral Park. Historical records, such as Sanborn maps (see Attachment 2) and aerial photos (see Attachment 3), indicate that PIW operations occurred in this area that is now used as a paved parking lot. PCBs were detected in subsurface soils (0.5'-5') from three locations at concentrations between approximately 200 and 1,000 µg/Kg.

PCBs also were detected at elevated concentrations in erodible soils samples collected from Cathedral Park pedestrian areas near this parking lot. Highest concentrations (1,080 -4,310 µg/Kg) were observed in the three samples collected north of the sidewalk that parallels the south side of the parking lot, suggesting that PCBs in erodible soils in this area decrease with distance from the PIW site. If the PIW site is a historical and/or current source of PCBs in this area, offsite migration via vehicle and equipment dragout, overland runoff, fugitive dusts, and direct releases may all have contributed to PCBs concentrations observed in the vicinity of the site.

Total PCBs concentrations in erodible soils with a complete pathway to the river via Basin 52 exceed Portland Harbor Joint Source Control Strategy screening level values and were higher than any charted values provided in Appendix E of the *DEQ Guidance for Evaluating the Stormwater Pathway at Upland Sites*. Erodible soils concentrations in North Bradford St. and adjacent Cathedral Park areas may exceed relevant risk-based concentrations. For these reasons, erodible soils at and in the vicinity of this site warrant investigation and control.

PIW Operations

PIW has operated at this location for close to 100 years. Records indicate that operations also extended onto other adjacent parcels on the east side of the rail line. Areas on the west side of the rail line also may have been used for material storage and transport. Sanborn maps from 1905, 1911, 1924-1928, 1950, and 1969 are provided in Attachment 2. Historical aerial photographs show areas of soil disturbance to the south, west, and north of the site (see Attachment 3). Plumbing records confirm discharge connections to offsite conveyance systems dating to 1917 (see Attachment 4).

Current and historical operations at the site, documented in readily available records, included foundry and machining operations as well as oil storage. Foundry operations can be associated with PCBs. Two foundry sites in Portland have been investigated under DEQ Cleanup Program oversight; both properties identified PCBs on site at concentrations warranting control⁴.

PIW operations are covered by a Standard Industrial Code (SIC 35) that requires National Pollutant Discharge Elimination System (NPDES) permit coverage. DEQ issued an NPDES permit to the site for a brief portion of 2001; the site currently maintains a No Exposure Certification for stormwater.

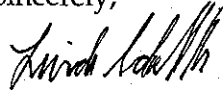
Basin 52 discharges to the Willamette River into an area of Portland Harbor identified by the U.S. Environmental Protection Agency (EPA) as an area of potential concern (AOPC 11) based on elevated concentrations of PCBs and other contaminants detected in river sediment. In

⁴ PECO, Inc. (ECSI No. 1973) and SFI Property (ECSI No. 5103).

support of the mutual objectives of the IGA, the City requests DEQ Site Assessment review of this property to determine whether Cleanup Program involvement is needed to address site contamination issues.

Please let me know if the City can assist with any additional information and thank you for your assistance with this concern.

Sincerely,



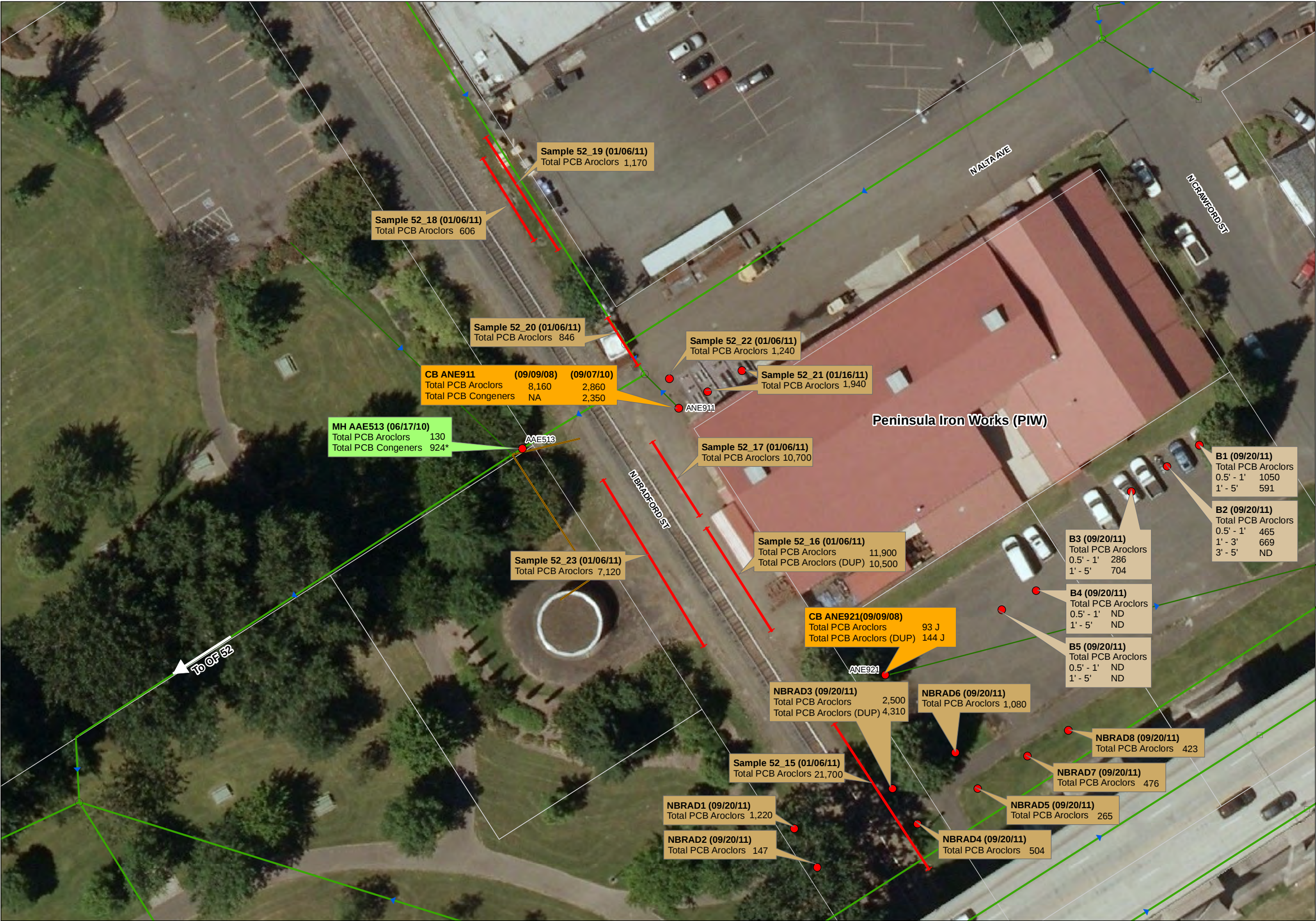
Linda Scheffler
Water Resources Program Manager
Portland Harbor Program

Enc.: Attachment 1 – Source Investigation Results in the Vicinity of PIW
Attachment 2 – Sanborn Maps
Attachment 3 – Aerial Photographs
Attachment 4 – Plumbing Records

cc: Richard Muza/EPA
Kristine Koch/EPA
Jim Anderson/DEQ
Kim Cox/BES
David Johnson/Peninsula Iron Works

Attachment 1

Source Investigation Results in the Vicinity of PIW



LEGEND

- Outfall Basin 52
- Sample Locations
- Sample Type**
 - Surface Soil Sample
 - Subsurface Soil Sample
 - Inline Solids Sample
 - Sediment Trap Sample
- Composite Sample
- All Other Features**
 - Storm Line
 - Manhole (MH)
 - Catch Basin (CB)
 - Tax Lot

NOTE:
NA = Not analyzed
ND = Not detected
J = Estimated
Total PCBs Aroclor and congener results in µg/Kg.
*Total PCBs concentration includes one or more estimated value(s). Because estimated values are not significant relative to the total concentration (i.e. <1%), the PCBs concentration is only slightly biased.

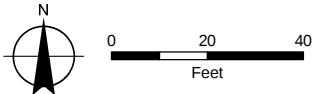


FIGURE 1
Total PCBs Concentrations in Vicinity of Peninsula Iron Works

Disclaimer:
Information contained on this map is accurate according to available records, however the City of Portland makes no warranty, expressed or implied, as to the completeness or accuracy of the information published.
Prepared By:
GSI, October 28, 2011
005_SCIR/OF_Basin_52
Source:
City of Portland BES,
Aerial Photo 2010



Table 1
Source Investigation in the Vicinity of Peninsula Iron Works
Total PCBs in Surface Soils, Subsurface Soils, and Inline Solids

Surface Soil Samples			
Sample Location	Date	Total PCB Aroclors ⁽¹⁾ (µg/Kg)	Total PCB Congeners ⁽²⁾ (µg/Kg)
52_15	1/6/2011	21,700	NA
52_16	1/6/2011	11,900	NA
52_16 (Dup)	1/6/2011	10,500	NA
52_17	1/6/2011	10,700	NA
52_18	1/6/2011	606	NA
52_19	1/6/2011	1,170	NA
52_20	1/6/2011	846	NA
52_21	1/6/2011	1,940	NA
52_22	1/6/2011	1,240	NA
52_23	1/6/2011	7,120	NA
NBRAD1	9/20/2011	1,220	NA
NBRAD2	9/20/2011	147	NA
NBRAD3	9/20/2011	2,500	NA
NBRAD3 (Dup)	9/20/2011	4,310	NA
NBRAD4	9/20/2011	504	NA
NBRAD5	9/20/2011	265	NA
NBRAD6	9/20/2011	1,080	NA
NBRAD7	9/20/2011	476	NA
NBRAD8	9/20/2011	423	NA

Subsurface Soil Samples				
Sample Location	Depth	Date	Total PCB Aroclors ⁽¹⁾ (µg/Kg)	Total PCB Congeners ⁽²⁾ (µg/Kg)
B1	6"-12"	9/20/2011	1,050	NA
	1'-5'	9/20/2011	591	NA
B2	6"-12"	9/20/2011	465	NA
	12"-36"	9/20/2011	669	NA
	36"-60"	9/20/2011	10 U ⁽³⁾	NA
B3	6"-12"	9/20/2011	286	NA
	1'-5'	9/20/2011	704	NA
B4	6"-12"	9/20/2011	10 U ⁽³⁾	NA
	1'-4'	9/20/2011	10 U ⁽³⁾	NA
B5	6"-12"	9/20/2011	10 U ⁽³⁾	NA
	1'-5'	9/20/2011	10 U ⁽³⁾	NA

Inline Solids Samples				
Sample Location	Sample Type	Date	Total PCB Aroclors ⁽¹⁾ (µg/Kg)	Total PCB Congeners ⁽²⁾ (µg/Kg)
CB ANE911	Inline Solids	9/9/2008	8,160	NA
	Inline Solids	9/7/2010	2,860	2,350
CB ANE921	Inline Solids	9/9/2008	93 J	NA
	Inline Solids (Dup)	9/9/2008	144 J	NA
MH AAE513	Sediment Trap	6/17/2010	130	924 ⁽⁴⁾

Notes:

CB = Catch Basin

J = The result is an estimated concentration due to pattern overlap or inconsistent QC results that indicate non-homogenous sample matrix.

MH = Manhole

NA = Constituent was not analyzed

U = The analyte was not detected above the reported sample quantification limit.

µg/Kg = Micrograms per kilogram

⁽¹⁾ Total PCB Aroclors concentrations in all samples (except at CB ANE921) represent the concentration of Aroclor 1260, as this was the only detected Aroclor. PCB Aroclors 1260 and 1254 were detected in the catch basin sediments collected from CB ANE921.

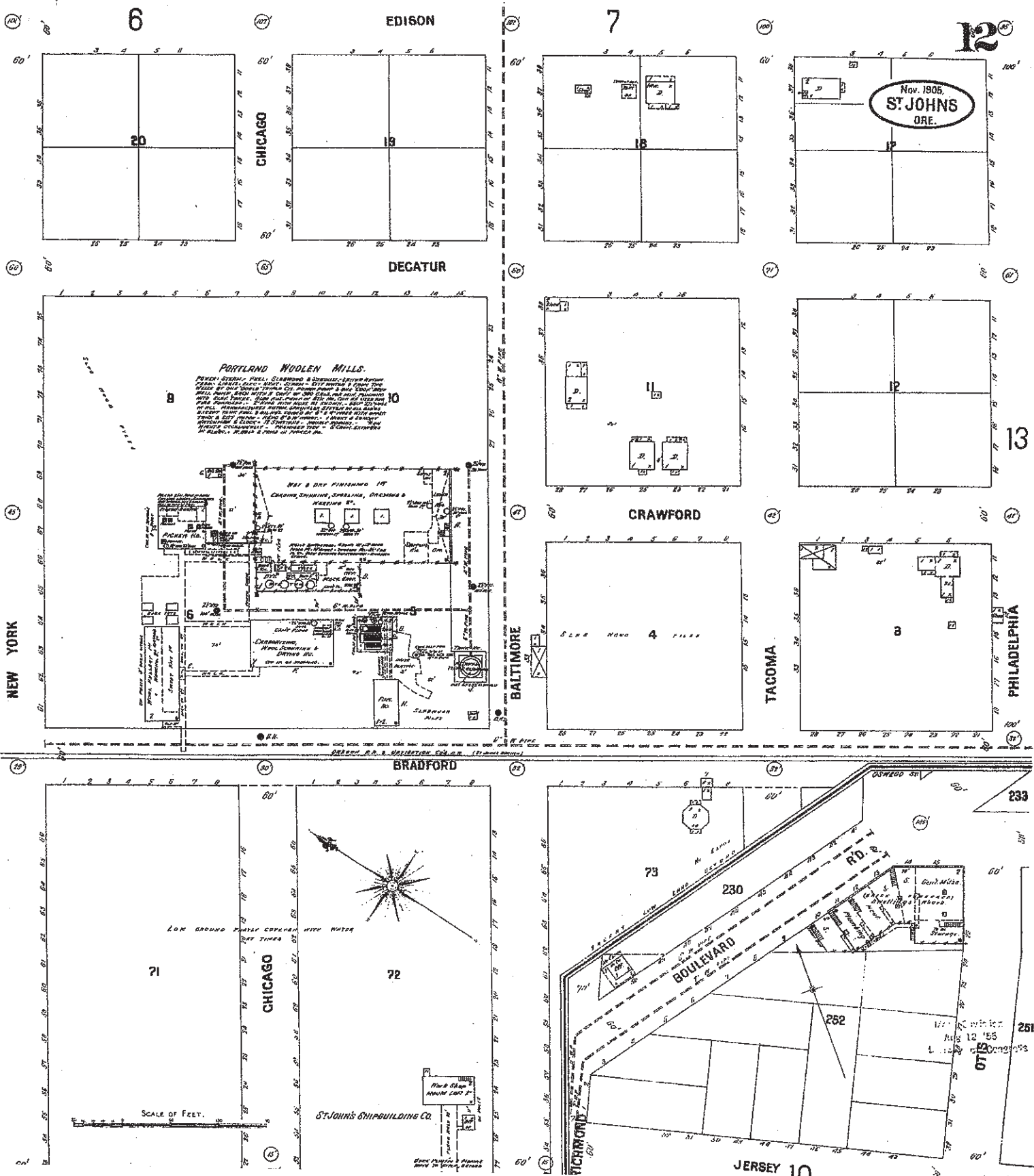
⁽²⁾ Total PCB Congeners are calculated by assigning "0" to undetected constituents and to results flagged with "EMPC".

⁽³⁾ Detection limit is for Aroclor 1260.

⁽⁴⁾ Total PCBs concentration includes one or more estimated value(s). Because estimated values are not significant relative to the total value (i.e., < 1%), the Total PCBs concentration is only slightly biased.

Attachment 2

Sanborn Maps



9

N. DECATUR

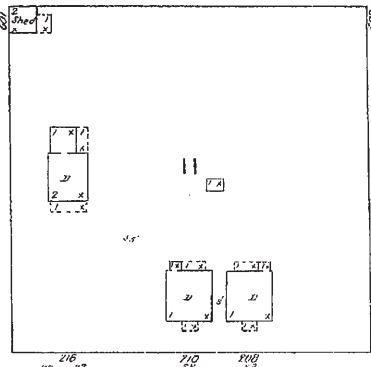
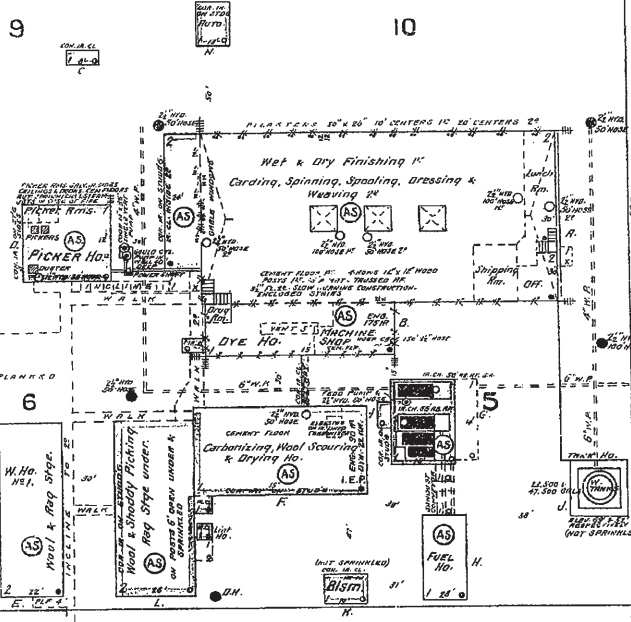
15

14

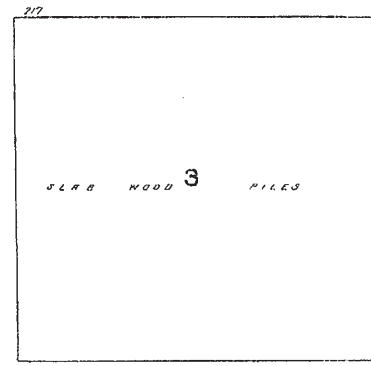
Nov. 1911
ST. JOHNS
ORE.

PORTLAND WOOLLEN MILLS.

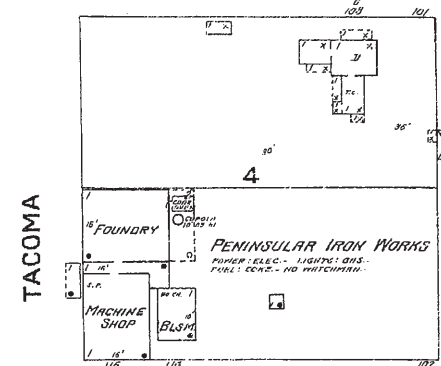
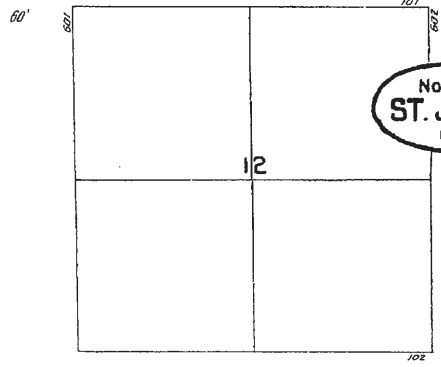
RIGHT AND SUNDY VENTILATION. CLOCK IS STATION. HOURLY ROUNDS.
POWER AND HEAT STEAM. FUEL: WOOD. LIGHTS: ELECTRIC.
CITY WATER & FIRE: WELL. BUT NOT FOR FIRE. WATER FROM A
10" X 36" VERTICAL JUMPER PUMP AND TANKS AS SHOWN. FRED
TANK IN DRYER ROOM. THIS IS NOT CONNECTED WITH OTHER WATER
SYSTEM. WINDMILLS & HOUSE NO. SHOWN.
MANUFACTURERS: RICH. SPINNING. 12' DYES. SO DESIGNATED. 121
MACHINE. 121 SYSTEM IN BLDG. NO. 5. A CORN P. CL. BLDG. ASSUMING.
WATER. NOT SYSTEM IN BLDG. NO. 5. PRIMARY SOURCE OF POWER. A
DRY SYSTEM IN OTHER BLDG. NO. 5. PRIMARY SOURCE OF POWER. A
22,500 GAL. & 47,500 GAL. TANK. CL. 60" X 12" FILLER. 121 PUMPS
IN FROM CITY MAIN. SECONDARY SOURCE OF SUPPLY. CITY MAIN.



N. CRAWFORD



N. BRADFORD



TACOMA

20

PHILADELPHIA

71

72

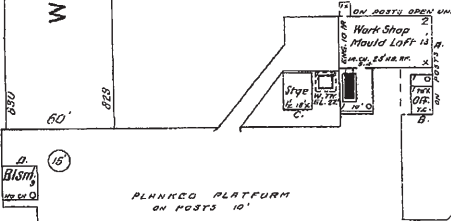
73

74

20

W. CHICAGO

ST. JOHNS
SHIPBUILDING CO.
NO WATCHMAN. NO LIGHTS.
POWER: STEAM. FUEL: WOOD.



PLANNED PLATFORM
ON POSTS 10'

MARINE WAYS

68

67

66

65

River

WHARF

ST. JOHNS
CITY DOCK

Scale of Feet.

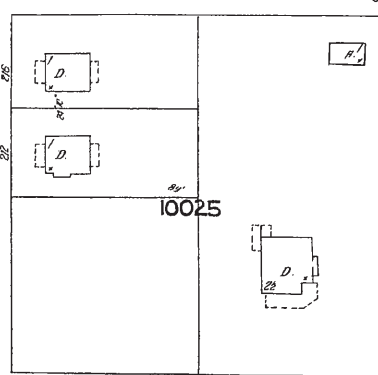
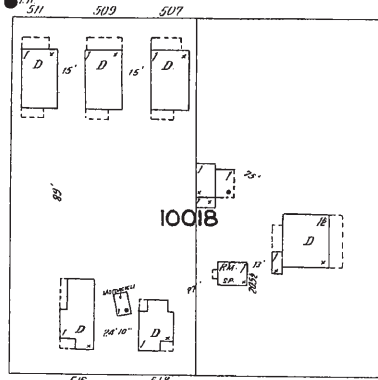
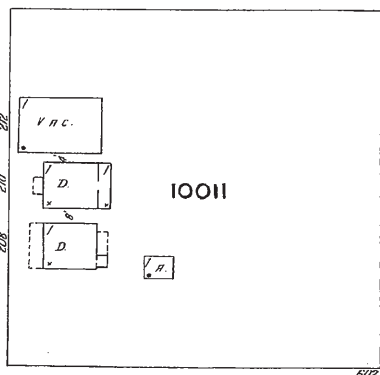
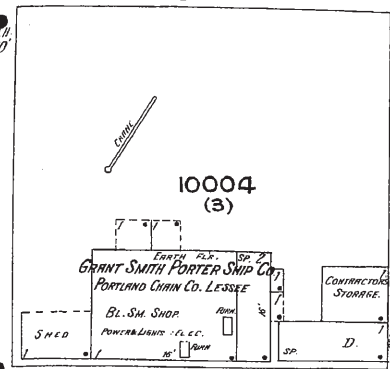
Willamette

327

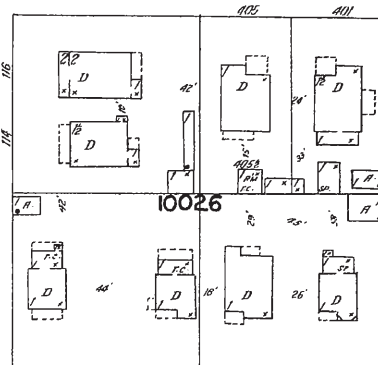
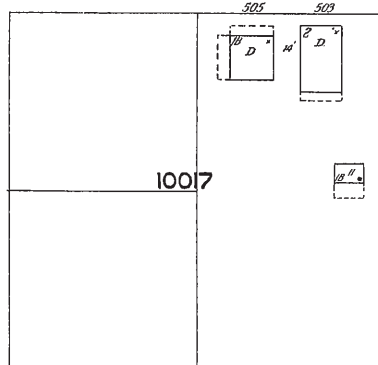
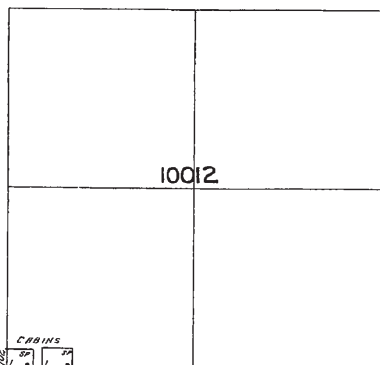
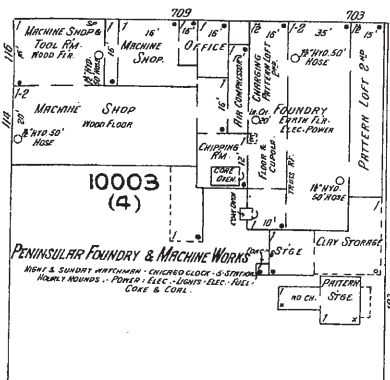
BALTIMORE

319

327



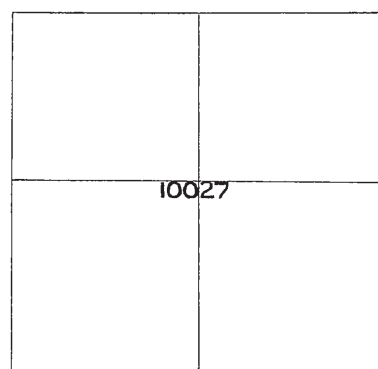
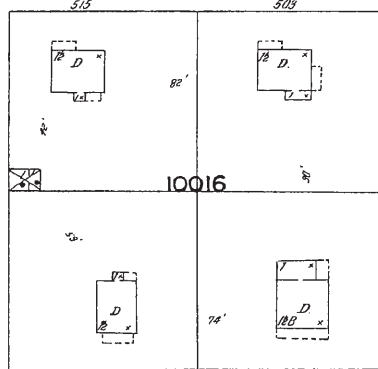
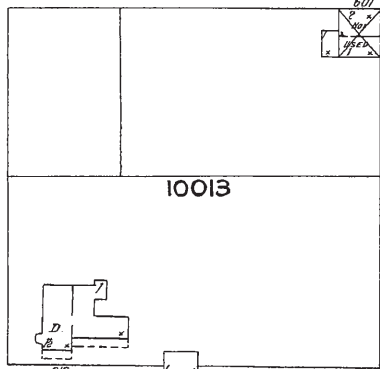
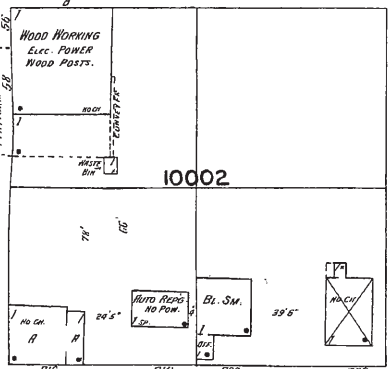
ALTA



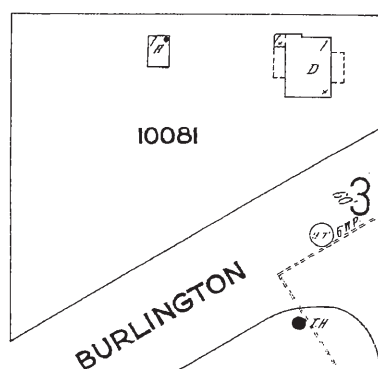
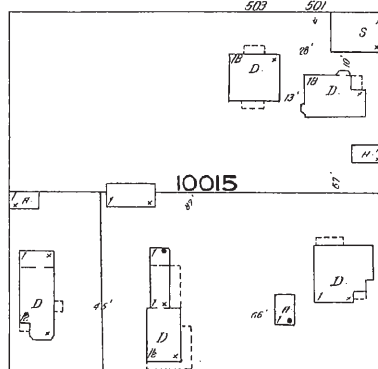
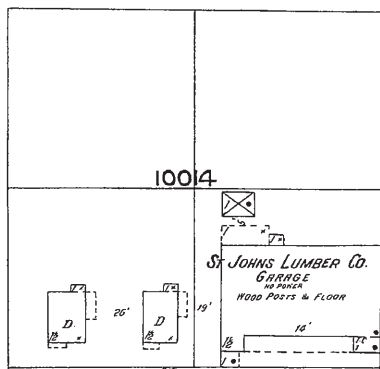
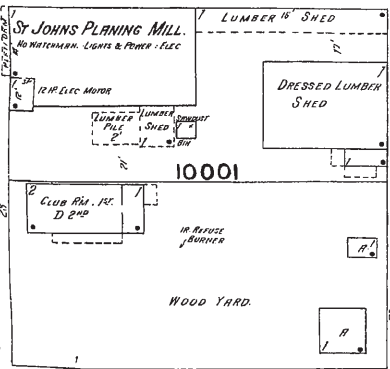
PHILADELPHIA

346

328



PITTSBURG



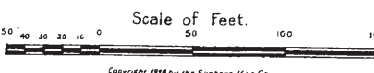
SALEM

347

336

335

BURLINGTON



319

327

1/4 SEC. 21/21
JAMES JOHN'S ADDN.
TO ST JOHN'S
ENTIRE SHEET

N. BALTIMORE

AV.

N. ALTA

AV.

N. PHILADELPHIA

AV.

328

346

N. BRADFORD

N. CRAWFORD

N. DECATUR

EDISON

N. WILLAMETTE

N. PITTSBURG

AV.

N. SALEM

AV.

347

N. BURLINGTON

335

336



SCALE OF FEET
0 50 100
COPYRIGHT SANBORN MAP COMPANY, INC.

Attachment 3

Aerial Photographs







★ Peninsula Iron Works Facility



USACE east and west side aerial 1966c RM 5.75_7.25, 1966







Attachment 4

Plumbing Records

Form W-89A 6618

BUREAU OF BUILDINGS

REPORT OF PLUMBING INSPECTION

4270

Permit No.

Street and No. Cor. Bradford & Alta

Owner Peninsula Iron Wks.

Contractor Edmondson & Co.

Lot N 1 Block 3 Addition James John

Stories and class of building 1 story frame iron wks.

Water Closets 2 Sinks 1 Urinals 1

Bath Tubs 1 Laundry Tubs 1 Slop Sinks 1

Basins 1 Floor Drains 1 Connected to SEWER

Rain Drains 1 Connected to SEWER

Kind of Vents Galv. Kind of Drains 4" CW - 6" J.C.

No. and Size of Stacks 1 - 4" Total No. Fixtures 1

Other Plumbing Fixtures 1 shower bath

Water Permits 1718/17 - 21774

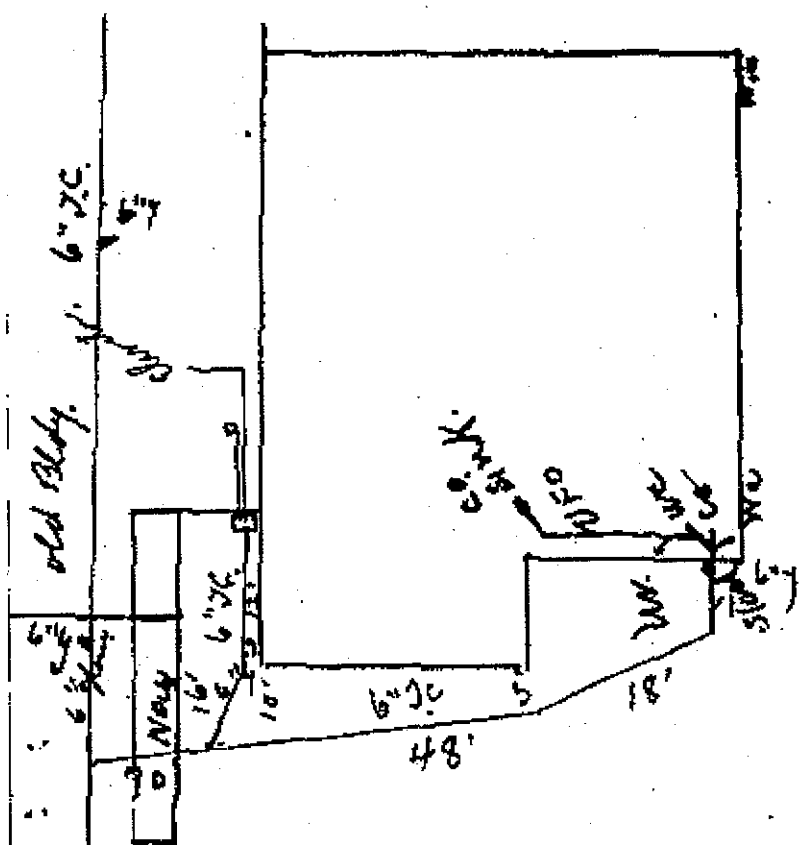
Date of First Inspection Sept. 12, 1917 Date of Final Inspection Nov. 8, 1917

Edmondson Inspector. Edmondson Inspector.

Date of First Certificate Nov. 11/17 Date of Final Certificate Nov. 11/17

See 11/6/17 O.

SEE OTHER SIDE FOR REMARKS



14' Phil. St.
 1 1/2 to 4 x 1 1/2
 2 W.C. on stack.
 No supply to floor drain!

10-11-18

REPORT OF PLUMBING INSPECTION

Street and No. Alta St., bet. Crawford & Permit No. 7846Owner Peninsula Iron WorksContractor Edmondson & Co.Lots 3 Block 3 Addition James JohnStories and class of building 1 story frame foundryWater Closets 2 Sinks 1 Urinals 1

Bath Tubs

Laundry Tubs

Slop Sinks

Basins

Floor Drains

Connected to SEWER

Rain Drains

Connected to

Kind of Vents galv.

Kind of Drains

No. and Size of Stacks 1-4"

Total No. Fixtures

Other Plumbing Fixtures

Water Permits 10/11/18-24299Date of First Inspection 10-7-18Date of Final Inspection Dec. 16, 1918Chas. W. Wm. Inspector.W. W. Wm. Inspector.

Date of First Certificate

Date of Final Certificate

SEE OTHER SIDE FOR REMARKS

BUREAU OF BUILDINGS
REPORT OF PLUMBING INSPECTION

Address 6618 N. Alta St. Date 3/31/45 Permit 170047

Lot 1 Blk 4 Add James John
Owner Peninsula Iron & Machine Works
Contractor Muirhead & Muirhead
Stories and class of building 1 story industrial building
Toilets 2 Floor Drains 1 Beer Cab
Bath Tubs Rain Drains Refr. Drains 2
Bath Showers Fountains 2 drk'g Urinals 2
Basins H. W. Tanks Catch Basins
Sinks 1 wash-up Cesspool Water Service
Laundry Trays 162801 Connected to
Water Permits Sewer Permit
Other Plumbing Fixtures Building permit 274164.

Date of First Inspection 4/4/45 Date of Final Inspection 8-2-45
Inspector J. W. Walker Inspector
Date of First Certificate Date of Final Certificate

BUREAU OF BUILDINGS
REPORT OF PLUMBING INSPECTION

Date 6/30/45
Permit 171651

Address 6618 N. Alta

Lot Blk Add

Owner Peninsular Foundry Co.
Contractor Kendall Heating Co.

Stories and class of building 1 story frame foundry

Toilets 1 & 1 moved Floor Drains 1 Beer Cab

Bath Tubs Rain Drains Refr. Drains

Bath Showers Fountains Urinals

Basins 1 new, 1 moved H. W. Tanks Catch Basins

Sinks Cesspool Water Service

Laundry Trays Dry Wells Connected to

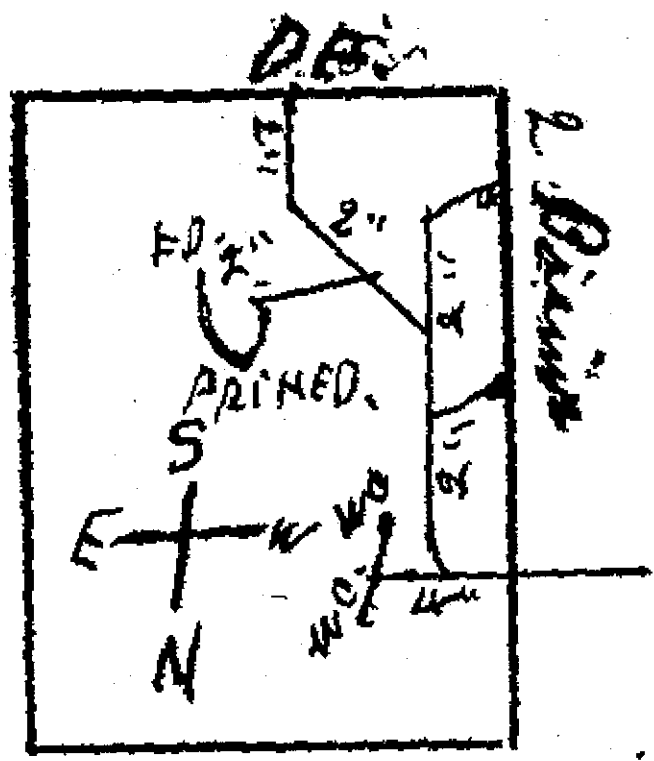
Water Permits 164444 Sewer Permit

Other Plumbing Fixtures Bldg. permit 274164.

Date of First Inspection 7.2.43 Date of Final Inspection 7.27.45
W. C. O'Connell Inspector W. C. O'Connell Inspector

Date of First Certificate Date of Final Certificate

2- WC. on w. side vented
 2" Brk to w. stack
 2" Brk & 10" to 2" vent.



6618-

• alla st. •

SB

1/4 SEC

CITY OF PORTLAND, OREGON
DEPARTMENT OF PUBLIC WORKS

Pmt. No.

01835220

SEWER BRANCH

Date

Location 6618 N Alta Ave.

Between

Addition

Lot

Blk.

Applicant

Waiver No ☐ Yes ☐ #

Remarks Connected to Sewer, 3-15-18

From Plumbing Records, NOV 30 1977

Inspected

19

By

Book

Page

New

Repair

Lot _____ Blk _____ Add _____
Owner Peninsula Iron Works
Contractor Martin T. Morlan This Permit is for
Stories and class of building old Ground work only
Water Closets 3N Hot-Water Tank _____ Cesspool Veld 6x19.5'
Bath, Shower 1N Auto. Cl. Washer _____ Conn. Cesspool 8x12
Bath Tub _____ Auto. Dishwasher _____ Dry Well _____
Basins 1N Drain Floor _____ Conn. Drywell _____
Sinks _____ Drain Area _____ Conn. Sewer 4"x100' 1N
Laundry Trays _____ Rain Drains 6N Storm Sewer 8"x100' 1N
Bldg. Pmt. _____ Water Ser. _____ Catch-Basins 2N
Remarks Sinks (service 1N); Urinals 2N; Fountains
1N; Sewer tap 1N; Storm tap 1N

Date of First Inspection _____ Date of Final Inspection _____
Inspector _____ Inspector _____

N. Crawford.

ALTA.
MH

trench
drain.

4" 4" 2" 2"

3"

2"

6" 5"

6" 5"

6" 5"

6" 5"

6" 5"

RR.

Willamette River.

SS 327 1/4 sec 2121SW

CITY OF PORTLAND, OREGON
DEPARTMENT OF PUBLIC WORKS

Plot No. 101769

Date 5-22-80

SEWER BRANCH

Location 6618 N Alta Avenue

Between

Addition James Johns Add to Lot 2,3 Blk 3

Applicant M. T. Morlan Waiver No ☒ Yes ☐ #

Remarks existing wye 112' E. of MH at N Bradford St. 6"
CSP 6' deep.

~~SANITARY ONLY SEWER~~

~~NOT ENTERED SEWER BOX~~

Inspected 5-20-80 19 By Clarence Ek

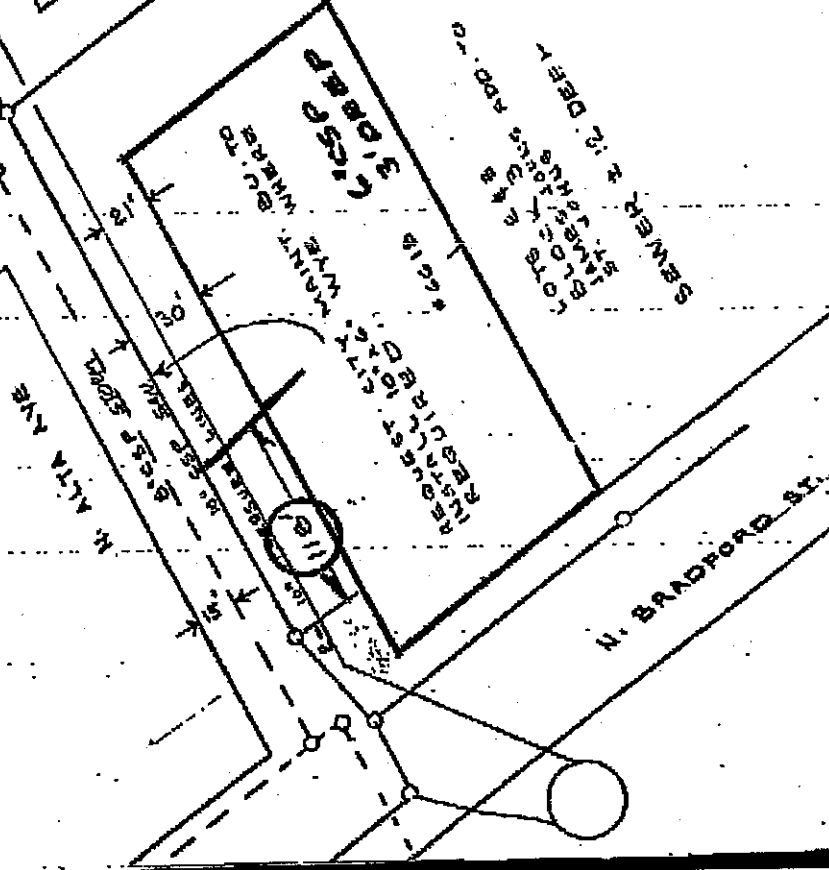
Book NIB Page New XXXX Repair

EX. 5 HO. P.

DEPARTMENT OF PUBLIC WORKS, CITY OF PORTLAND

SEWER CONNECTION MAP

- | | | | | |
|----------------------------|-------|--|--|---|
| Type of sewer | | ☐ STORM | ☒ SANITARY | ☐ COMBINATION |
| Basic permit required from | | ☐ STATE HIGHWAY DEPT. | ☐ COUNTY | |
| Special requirements | | ☐ WAIVER | ☐ EASEMENT | ☐ SPECIAL CHARGE |
| | | ☐ COMBINE STORM & SANITARY AT CURB LINE | ☐ TAP FEE | |
| | | ☐ E.P.C. WASTE WATER SEPARATION | | |



RECONNECTION
The approval covers only that portion of the sewer which is within the dedicated street area. The location of the sewer shall not differ from this plan without written approval.

APPROVED: *[Signature]* DATE: 11/10/61
CITY ENGINEER
PERMIT NO. 101769

DATE: 11/10/61
BY: EIE:SW

MT. MORLAN
ENGINEER

327 1/4 SEC 2121SW

CITY OF PORTLAND, OREGON
DEPARTMENT OF PUBLIC WORKS

Pmt. No. 101770

Date 5-22-80

SEWER BRANCH

Location 6618 N Alta Avenue

Between

Addition James Johns Add. to Lot 2,3 Blk 3

Applicant M. F. Morlan Waiver No ☒ Yes ☐ #

Remarks City maint. bu. wye 111' E. of MH at N Bradford
St. 2 lengths of pipe on wye, then 8th bend and into
curb line. 6" CSP 3' deep. Pipe shallow to avoid
pressure lines.

~~ENTERED SEWER BOOK~~

~~STORM ONLY SEWER~~

Inspected 5-20-80 19 By Clarence Ek

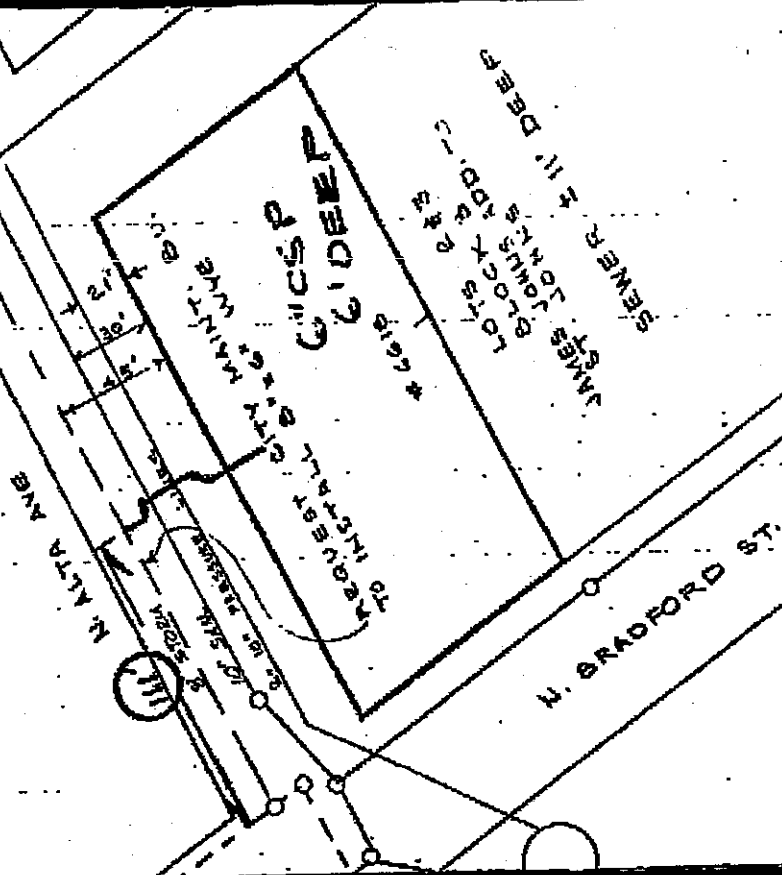
Book 6 Page 510 New XXXX Repair

EX SHOP

DEPARTMENT OF PUBLIC WORKS, CITY OF PORTLAND

SEWER CONNECTION MAP

- Type of sewer ☒ STORM; ☐ SANITARY ☐ COMBINATION
Local permit required from: ☐ STATE HIGHWAY DEPT. ☐ COUNTY ☐ SPECIAL CHARGES
Special requirements: ☐ WAIVER ☐ EASEMENT ☒ TAP FEE
☐ COMBINE STORM & SANITARY AT CURB LINE ☐ WASTE WATER SEPARATION



RE-CONNECTION

The approved sewer only that portion of the sewer which is within the designated street area. The location of the sewer shall not differ from this plan without written approval.

AMENDED

CITY DESIGNED 222

PERMIT NO. 101770

DATE 5/19/60

SCALE N.T.S.
SHEET 2 OF 2 SW

M. J. MOERLAN
ENGINEER