FINAL DRAFT PERMIT APPLICATION
The Boeing Company's
Auburn Fabrication Division Plant
Permit No. WAD 041337130
RCRA Permit Renewal
Volume 1

May 11, 2018

TABLE OF CONTENTS

LIST OF ABBREVIATIONS AND ACRONYMS

AO ..... Agreed Order
AOCs ..... Areas of Concern
bgs ..... Below Ground Surface
Boeing ..... The Boeing Company
Boeing Auburn Facility ..... Boeing Auburn Fabrication Division Plant
CCP ..... Comprehensive Contingency Plan
cDCE cis-1,2-Dichloroethene
CFR ..... Code of Federal Regulations
CSU ..... Container Storage Unit
Ecology ..... Washington State Department of Ecology
EPA ..... US Environmental Protection Agency
FS ..... Feasibility Study
ft ..... Feet/Foot
IRA ..... Interim Remedial Action
JA ..... Junior Achievement
µg/L ..... Micrograms per Liter
MTCA ..... Model Toxics Control Act
PSE ..... Puget Sound Energy
RCRA ..... Resource Conservation and Recovery Act
RFA ..... RCRA Facility Assessment
RI ..... Remedial Investigation
SWMU ..... Solid Waste Management Unit
TCE ..... Trichloroethene
VC ..... Vinyl Chloride
VOC ..... Volatile Organic Compound
VSI ..... Visual Site Inspection
WAC ..... Washington Administrative Code
WPP ..... Wastewater Pretreatment Plant

SECTION A: PART A FORMS

OMB# 2050-0024; Expires 01/31/2017

SEND COMPLETED FORM TO: The Appropriate State or Regional Office.

United States Environmental Protection Agency
RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal (MARK ALL BOX(ES) THAT APPLY)

Reason for Submittal:

- ☐ To provide an Initial Notification (first time submitting site identification information / to obtain an EPA ID number for this location)
- ☐ To provide a Subsequent Notification (to update site identification information for this location)
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application
- ☒ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____)
- ☐ As a component of the Hazardous Waste Report (If marked, see sub-bullet below)
  - ☐ Site was a TSD facility and/or generator of >1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or >100 kg of acute hazardous waste spill cleanup in one or more months of the report year (or State equivalent LQG regulations)

2. Site EPA ID Number

EPA ID Number W A D 0 4 1 3 3 7 1 3 0

3. Site Name

Name: BOEING COMMERCIAL AIRPLANES FABRICATION DIVISION, AUBURN PLANT

4. Site Location Information

Street Address: 700 15th STREET SW

City, Town, or Village: AUBURN | **County:** KING

State: WA | **Country:** USA | **Zip Code:** 98002

5. Site Land Type

☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

6. NAICS Code(s) for the Site (at least 5-digit codes)

A. 3 3 6 4 1 1 | C. | |

B. 3 3 6 4 1 3 | D. | |

7. Site Mailing Address

Street or P.O. Box: P.O. BOX 3707

City, Town, or Village: SEATTLE

State: WA | **Country:** USA | **Zip Code:** 98124

8. Site Contact Person

First Name: MICHAEL | **MI:** L | **Last:** VERHAAR

Title: ENVIRONMENTAL MANAGER

Street or P.O. Box: P.O. BOX 3707 MC 5A-214

City, Town or Village: SEATTLE

State: WA | **Country:** USA | **Zip Code:** 98124

Email: MICHAEL.L.VERHAAR@BOEING.COM

Phone: 425-234-6903 | **Ext.:** | **Fax:**

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner: THE BOEING COMPANY | **Date Became Owner:** 1966

Owner Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

Street or P.O. Box: 100 N. RIVERSIDE

City, Town, or Village: CHICAGO | **Phone:** 253-931-2121

State: IL | **Country:** USA | **Zip Code:** 60606

B. Name of Site's Operator: JACK MEEHAN | **Date Became Operator:** 2015

Operator Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

10. Type of Regulated Waste Activity (at your site)
Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities; Complete all parts 1-10.

Y ☑ N ☐ **1. Generator of Hazardous Waste**
If "Yes," mark only one of the following – a, b, or c.

- ☑ a. LQG: Generates, in any calendar month, 1,000 kg/mo (2,200 lbs/mo.) or more of hazardous waste; **or** Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lbs/mo) of acute hazardous waste; **or** Generates, in any calendar month, **or** accumulates at any time, more than 100 kg/mo (220 lbs/mo) of acute hazardous spill cleanup material.
- ☐ b. SQG: 100 to 1,000 kg/mo (220 – 2,200 lbs/mo) of non-acute hazardous waste.
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs/mo) of non-acute hazardous waste.

If "Yes" above, indicate other generator activities in 2-10.

Y ☐ N ☑ **2. Short-Term Generator** (generate from a short-term or one-time event and not from on-going processes). If "Yes," provide an explanation in the Comments section.

Y ☐ N ☑ **3. United States Importer of Hazardous Waste**

Y ☐ N ☑ **4. Mixed Waste (hazardous and radioactive) Generator**

Y ☐ N ☑ **5. Transporter of Hazardous Waste**
If "Yes," mark all that apply.

- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☐ N ☑ **6. Treater, Storer, or Disposer of Hazardous Waste** Note: A hazardous waste Part B permit is required for these activities.

Y ☐ N ☑ **7. Recycler of Hazardous Waste**

Y ☐ N ☑ **8. Exempt Boiler and/or Industrial Furnace**
If "Yes," mark all that apply.

- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☑ **9. Underground Injection Control**

Y ☑ N ☐ **10. Receives Hazardous Waste from Off-site**

B. Universal Waste Activities; Complete all parts 1-2.

Y ☑ N ☐ **1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste managed at your site. If "Yes," mark all that apply.**

- a. Batteries ☑
- b. Pesticides ☐
- c. Mercury containing equipment ☐
- d. Lamps ☑
- e. Other (specify) _____ ☐
- f. Other (specify) _____ ☐
- g. Other (specify) _____ ☐

Y ☐ N ☑ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities; Complete all parts 1-4.

Y ☐ N ☑ **1. Used Oil Transporter**
If "Yes," mark all that apply.

- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☐ N ☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes," mark all that apply.

- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☑ **3. Off-Specification Used Oil Burner**

Y ☐ N ☑ **4. Used Oil Fuel Marketer**
If "Yes," mark all that apply.

- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262 Subpart K

- ❖ You can ONLY Opt into Subpart K if:
  - you are at least one of the following: a college or university; a teaching hospital that is owned by or has a formal affiliation agreement with a college or university; or a non-profit research institute that is owned by or has a formal affiliation agreement with a college or university; AND
  - you have checked with your State to determine if 40 CFR Part 262 Subpart K is effective in your state

Y☐ N☑ 1. Opting into or currently operating under 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories **See the item-by-item instructions for definitions of types of eligible academic entities. Mark all that apply:**

☐ **a. College or University**

☐ **b. Teaching Hospital that is owned by or has a formal written affiliation agreement with a college or university**

☐ **c. Non-profit Institute that is owned by or has a formal written affiliation agreement with a college or university**

Y☐ N☑ 2. Withdrawing from 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories

11. Description of Hazardous Waste

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D002						

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-Regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

12. Notification of Hazardous Secondary Material (HSM) Activity

Y ☐ N ☑ Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 261.2(a)(2)(ii), 40 CFR 261.4(a)(23), (24), or (25)?

If "Yes," you must fill out the Addendum to the Site Identification Form: Notification for Managing Hazardous Secondary Material.

13. Comments

14. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all owner(s) and operator(s) must sign (see 40 CFR 270.10(b) and 270.11).

Signature of legal owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)

EPA ID Number | W | A | D | 0 | 4 | 1 | 3 | 3 | 7 | 1 | 3 | 0 |

OMB#: 2050-0024; Expires 01/31/2017

ADDENDUM TO THE SITE IDENTIFICATION FORM: NOTIFICATION OF HAZARDOUS SECONDARY MATERIAL ACTIVITY

ONLY fill out this form if:

- ❖ You are located in a State that allows you to manage excluded hazardous secondary material (HSM) under 40 CFR 261.2(a)(2)(ii), 261.4(a)(23), (24), or (25) (or state equivalent). See http://www.epa.gov/epawaste/hazard/dsw/statespf.htm for a list of eligible states; **AND**
- ❖ You are or will be managing excluded HSM in compliance with 40 CFR 261.2(a)(2)(ii), 261.4(a)(23), (24), or (25) (or state equivalent) or you have stopped managing excluded HSM in compliance with the exclusion(s) and do not expect to manage any amount of excluded HSM under the exclusion(s) for at least one year. Do not include any information regarding your hazardous waste activities in this section.

1. Indicate reason for notification. Include dates where requested.

☐ Facility will begin managing excluded HSM as of _____ (mm/dd/yyyy).

☐ Facility is still managing excluded HSM/re-notifying as required by March 1 of each even-numbered year.

☐ Facility has stopped managing excluded HSM as of _____ (mm/dd/yyyy) and is notifying as required.

2. Description of excluded HSM activity. Please list the appropriate codes and quantities in **short tons** to describe your excluded HSM activity ONLY (do not include any information regarding your hazardous wastes). Use additional pages if more space is needed.

a. Facility code (answer using codes listed in the Code List section of the instructions)	**b. Waste code(s) for HSM**	**c. Estimated short tons of excluded HSM to be managed annually**	**d. Actual short tons of excluded HSM that was managed during the most recent odd-numbered year**	**e. Land-based unit code** (answer using codes listed in the Code List section of the instructions)

3. Facility has financial assurance pursuant to 40 CFR 261.4(a)(24)(vi). (Financial assurance is required for reclaimers and intermediate facilities managing excluded HSM under 40 CFR 261.4(a)(24) and (25))

Y ☐ N ☐ Does this facility have financial assurance pursuant to 40 CFR 261.4(a)(24)(vi)?

EPA ID Number | W | A | D | 0 | 4 | 1 | 3 | 3 | 7 | 1 | 3 | 0 | OMB#: 2050-0024; Expires 01/31/2017

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact	**First Name:**	**MI:**	**Last Name:**
	Contact Title:		
	Phone:	**Ext.:**	**Email:**
2. Facility Permit Contact Mailing Address	**Street or P.O. Box:**		
	City, Town, or Village:		
	State:		
	Country:	**Zip Code:**	
3. Operator Mailing Address and Telephone Number	**Street or P.O. Box:**		
	City, Town, or Village:		
	State:	**Phone:**	
	Country:	**Zip Code:**	
4. Facility Existence Date	**Facility Existence Date (mm/dd/yyyy):**		

5. Other Environmental Permits

A. Facility Type *(Enter code)*	**B. Permit Number**	**C. Description**

6. Nature of Business:

The Boeing Company's Commercial Airplane Group (BCAG) Fabrication Division's Auburn site manufactures parts, components, and sub-assemblies in support of the commercial and military aircraft production operations of the Boeing Company. The products manufactured at the Auburn site are sent to other Boeing manufacturing plants for aircraft final assembly. The Auburn site performs manufacturing work operations in three shifts, 24 hours per day, 365 days per year. These various

7. Process Codes and Design Capacities – Enter information in the Section on Form Page 3

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item 8.

B. PROCESS DESIGN CAPACITY – For each code entered in Item 7.A; enter the capacity of the process.

1. **AMOUNT – Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.**
2. **UNIT OF MEASURE – For each amount entered in Item 7.B(1), enter the code in Item 7.B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.**

C. PROCESS TOTAL NUMBER OF UNITS – Enter the total number of units for each corresponding process code.

Process Code	Process	Appropriate Unit of Measure for Process Design Capacity
Disposal		
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectares-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
Storage		
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
Treatment		
T01	Tank Treatment	Gallons Per Day; Liters Per Day
T02	Surface Impoundment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Metric Tons Per Hour; or Million BTU Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Short Tons Per Day; BTUs Per Hour; Gallons Per Day; Liters Per Hour; or Million BTU Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; or Million BTU Per Hour
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; BTU Per Hour; Liters Per Hour; Kilograms Per Hour; or Million BTU Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR 260.10	
T94	Containment Building Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; BTU Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million BTU Per Hour
Miscellaneous (Subpart X)		
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; BTU Per Hour; or Million BTU Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

Unit of Measure	Unit of Measure Code
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V
Short Tons Per Hour	D
Short Tons Per Day	N
Metric Tons Per Hour	W
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	X
Million BTU Per Hour	X
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
BTU Per Hour	I

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	For Official Use Only					
					(1) Amount (Specify)	(2) Unit of Measure							
X	1	S	0	2	533.788	G	001						
	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
1	0												
1	1												
1	2												
1	3												

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the line sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04, and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04, and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	For Official Use Only					
					(1) Amount (Specify)	(2) Unit of Measure							
X	2	T	0	4	100.00	U	001						

9. Description of Hazardous Wastes - Enter Information in the Sections on Form Page 5

A. EPA HAZARDOUS WASTE NUMBER – Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each listed waste entered in Item 9.A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Item 9.A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in Item 9.B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all listed hazardous wastes.

For non-listed waste: For each characteristic or toxic contaminant entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. **Enter the first two as described above.**
2. **Enter "000" in the extreme right box of Item 9.D(1).**
3. **Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 9.E.**

2. PROCESS DESCRIPTION: If code is not listed for a process that will be used, describe the process in Item 9.D(2) or in Item 9.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. **Select one of the EPA Hazardous Waste Numbers and enter it in Item 9.A. On the same line complete Items 9.B, 9.C, and 9.D by estimating the total annual quantity of the waste and describing all the processes to be used to store, treat, and/or dispose of the waste.**
2. **In Item 9.A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Item 9.D.2 on that line enter "included with above" and make no other entries on that line.**
3. **Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.**

EXAMPLE FOR COMPLETING Item 9 (shown in line numbers X-1, X-2, X-3, and X-4 below) – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter Code)									(2) PROCESS DESCRIPTION (If code is not entered in 9.D(1))
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

9. Description of Hazardous Wastes ***(Continued. Use additional sheet(s) as necessary; number pages as 5a, etc.)***

Line Number		A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
					(1) PROCESS CODES (Enter Code)	(2) PROCESS DESCRIPTION (If code is not entered in 9.D(1))
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
1	0					
1	1					
1	2					
1	3					
1	4					
1	5					
1	6					
1	7					
1	8					
1	9					
2	0					
2	1					
2	2					
2	3					
2	4					
2	5					
2	6					
2	7					
2	8					
2	9					
3	0					
3	1					
3	2					
3	3					
3	4					
3	5					
3	6					

9. Description of Hazardous Wastes ***(Continued. Use additional sheet(s) as necessary; number pages as 5a, etc.)***

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter Code)									(2) PROCESS DESCRIPTION (If code is not entered in 9.D.1)

10. Map

Attach to this application a topographical map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all spring, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

11. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

12. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, and disposal areas; and sites of future storage, treatment, or disposal areas (see instructions for more detail).

13. Comments

SECTION B: FACILITY DESCRIPTION AND GENERAL PROVISIONS

40 Code of Federal Regulations (CFR) 270.14(b)(1), (11), (19); 264.18

SECTIONS

TABLES

FIGURES

Introduction

This application is for a Resource Conservation Recovery Act (RCRA) dangerous waste management permit lite for corrective action and post closure requirements at The Boeing Company's (Boeing) Auburn Fabrication Division Plant (Boeing Auburn Facility) in Auburn and Algona, Washington. The location of the Facility is shown on Figure B-1[1]. Plant layout is shown on Figure B-2.

The initial RCRA permit for the Facility (Permit No. 87-1) was jointly issued by Washington State Department of Ecology (Ecology) and US Environmental Protection Agency (EPA) in 1987. In 2006, Ecology issued a new permit light (Permit No. WAD 041337130), to replace the original permit, in conjunction with issuance of the First Amended Agreed Order (AO, No. 01HWTRNR-3345).

[1] Tables and figures are included at the end of this section.

The original permit issued in 1987 addressed several permitted units that are no longer in operation at the Boeing Auburn Facility. These units include the former dangerous waste container storage unit (CSU) at Building 17-34, two surface impoundments, one waste pile, and five waste hold tanks. The former dangerous waste CSU at Building 17-34 was clean and closed in 2006. The impoundments were closed in 1987 and 1988. The waste pile was closed in 1991 and the residual contaminants were delisted. The waste hold tanks were closed in 1994 and 1996. All units received clean closure certification at the time of closure.

In 1998, Boeing submitted a Part B application for storage of a 220-gallon dangerous waste CSU in Building 17-66. Boeing later withdrew its application. Ecology never issued a RCRA Permit to cover the CSU and waste was never stored there.

The on-site wastewater pretreatment plant (WPP) is a dangerous waste permit-by-rule facility with an industrial waste discharge permit issued by King County Department of Natural Resources (KCDNR). WPP operations at the Boeing Auburn Facility are beyond the scope of this RCRA facility permit application. Other than wastes treated by the WPP, the Facility does not store, treat, or land-dispose of dangerous wastes.

B-1 GENERAL FACILITY DESCRIPTION

40 CFR 270.14(b)(1)

The Boeing Auburn Facility is located within the limits of both Auburn and Algona, Washington (Figure B-1). The Boeing Auburn Facility currently occupies approximately 250 acres and consists of manufacturing, office, and warehouse buildings and open space.

The legal boundaries of the Facility are shown on Figure B-2. In general, the Boeing Auburn property is bounded on the north by 15th Street SW, on the east by property owned by the US General Services Administration (GSA) and Safeway, on the south by Ellingson Road, and on the west by the Union Pacific and St. Paul & Pacific Railroad rights-of-way.

The Facility originally occupied approximately 380 acres but modifications to Boeing's previous Part A permit removed several parcels from the Facility including Safeway, YMCA, Junior Achievement (JA), and Puget Sound Energy (PSE). Ecology approved the modifications to Part A of the permit in 2002 for Safeway, 2003 for YMCA and JA, and 2004 for the PSE Property. Boeing also transferred property known as Area 1 to AMB Property Corporation (now Prologis) in 2005. However, Prologis became a potentially liable party (PLP) and Area 1 remains part of the RCRA facility.

The Facility is serviced by City of Auburn (water) and PSE (electricity and natural gas), and sanitary sewage is routed to the King County Wastewater Division system.

Nature of Business

The Boeing Auburn Facility activities include manufacturing parts and components, and providing sub-assemblies in support of aircraft production operations of Boeing. The Boeing Auburn Facility has been operational since 1967. Products manufactured at the Boeing Auburn Facility are sent to other Boeing manufacturing plants for aircraft final assembly. The Boeing Auburn Facility operates in three shifts, 24 hours per day, 365 days per year. General information about the Boeing Auburn Facility is provided in Table B-1.

The various manufacturing activities and operations at the Boeing Auburn Facility involve the use of metalworking and machining equipment, plastic and non-metal parts manufacturing and assembly areas, tooling shops, and warehouse areas. The metal finishing areas include several process tankline areas for the cleaning, sealing, and surface treatment of the metal components used in aircraft and other product lines. Lists of the environmental permits associated with the Boeing Auburn Facility are provided in Tables B-2 and B-3.

B-2 TOPOGRAPHIC MAP

40 CFR 270.14(b)(19)

The area where the Boeing Auburn Facility is located has very little topographic relief. Detailed topographic mapping of the Boeing Auburn Facility is shown on Figure B-3. All elevations shown on Figure B-3 are referenced to the North American Vertical Datum of 1988 (NAVD88). The detailed topographic map shows buildings, structures, localized surface water drainage features, and provides a reference for other maps described in this section.

100 Year Floodplain and Surface Waters

The Boeing Auburn Facility is not located within the 100-year floodplain (Figure B-4). The nearest 100-year floodplain boundary is along the White River, approximately 2,800 feet (ft) southeast of the property boundary. Surface and subsurface drainage barriers control runoff from the Boeing Auburn Facility. Surface water features are shown on Figure B-1.

Wind Direction

Wind direction data compiled by the Puget Sound Clean Air Agency (PSCAA) is presented on Figure B-5.

Drainage

Stormwater at the Facility is captured by a stormwater sewer system that includes catch basins, oil/water separators, and outfalls connected by stormwater pipes. The main outfall from the stormwater sewer system discharges to an oil containment/sedimentation basin that discharges into a biofiltration basin before entering Government Canal. All sanitary sewage is pumped to the King

County Wastewater Division sewage treatment plant located in Renton, Washington. The storm and sanitary sewer systems at the Boeing Auburn Facility are shown on Figures B-6 and B-7, respectively.

Industrial waste lines, including lines that carry oil, acid, and alkaline wastes, are shown on Figure B-8. Industrial waste lines are plumbed to the WPP. As previously discussed, the WPP and all related piping, tanks, and sumps, is under the authority of a King County Wastewater Division pretreatment permit and is a permit-by-rule unit under Washington Administrative Code (WAC) 173-303-802; its operations are not within the scope of this permit renewal application.

Access Control Systems

A perimeter fence surrounds the Boeing Auburn Facility (Figure B-2). Entry to the Facility is via guarded gates shown on Figure B-2.

Water Supply and Underground Injection Wells

No water supply wells are located at the Boeing Auburn Facility. The City of Pacific operates water supply wells on property in the southern part of the Boeing Auburn Facility. Six additional water supply wells are located within a mile of the property. Water well locations in the vicinity of the Boeing Auburn Facility are shown on Figure B-1. There are no underground injection wells on or in the vicinity of the Boeing Auburn Facility that are used for waste or wastewater disposal. Five injection wells associated with an *in situ* bioremediation pilot test are located on private property in Algona along the west side of Milwaukee Avenue North. The wells are currently used for monitoring only and not for injection purposes.

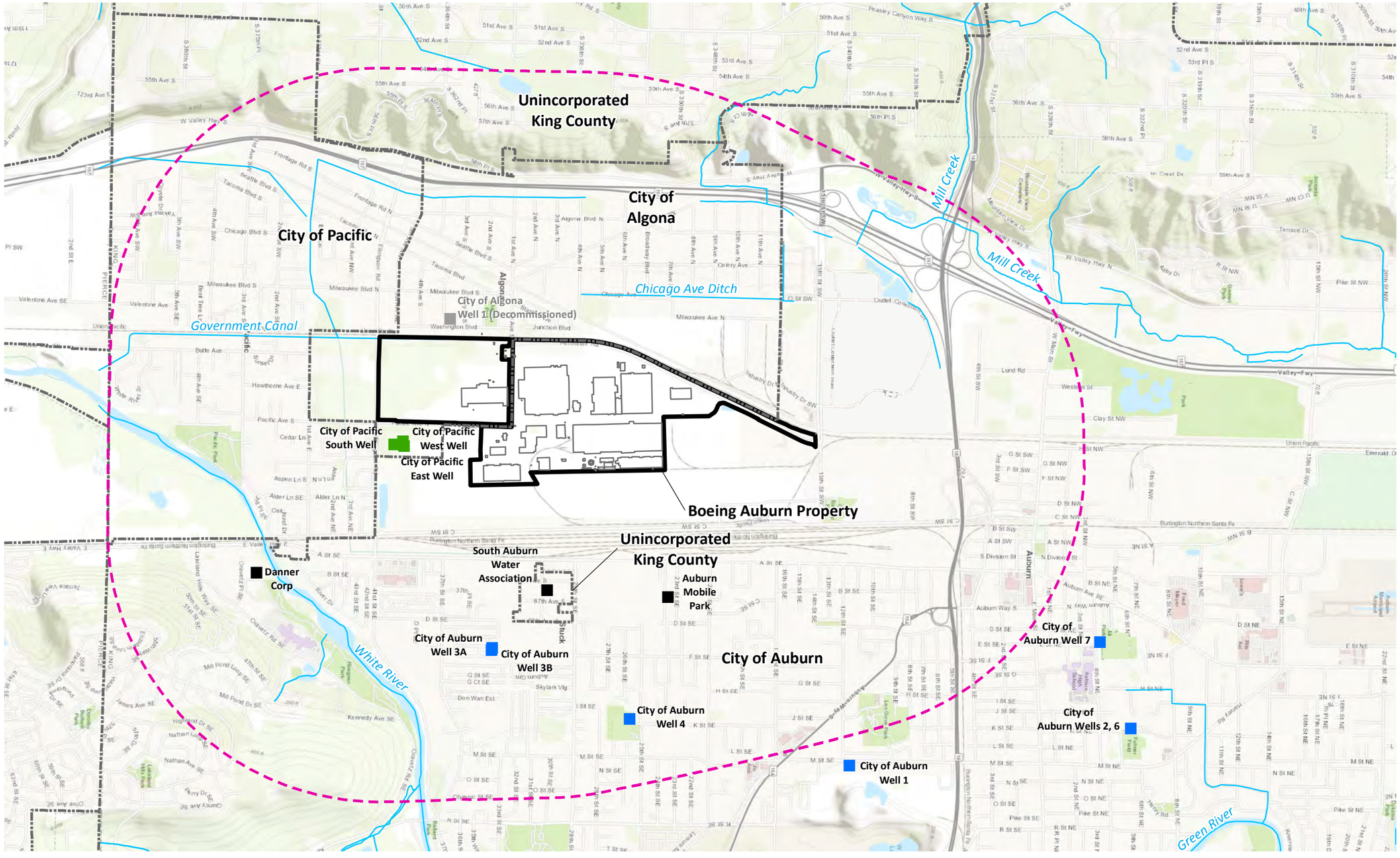
Solid Waste Management Units and Areas of Concern

The AO identified solid waste management units (SWMUs) and areas of concern (AOCs) from the RCRA Facility Assessment to be addressed during the remedial investigation (RI). SWMUs and AOCs from the RI are shown on Figure B-9. SWMUs and AOCs are further discussed in Section J of the Part B application package.

B-3 FACILITY LOCATION INFORMATION

40 CFR 270.14(b)(11); 264.18

The Boeing Auburn Facility is located within the boundaries of Auburn and Algona, Washington and borders Pacific, Washington. The Boeing Auburn Facility location in relationship to city boundaries is shown on Figure B-1. Land use maps for each city are included on Figures B-10 through B-12. The land around the Boeing Auburn Facility is generally zoned for industrial or commercial use, with some residential zoning south of Ellingson Road.



Legend

- City of Algona Decommissioned Well
- City of Pacific Well
- City of Auburn Well
- Other Group A Wells
- Boeing Property
- City Limits
- Waterways
- Water Bodies
- 1-Mile Site Buffer

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 2,000 4,000

Scale in Feet

N

Data Sources: King County; Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**Site Location, Regional Topography, and Water Supply Wells**	Figure B-1

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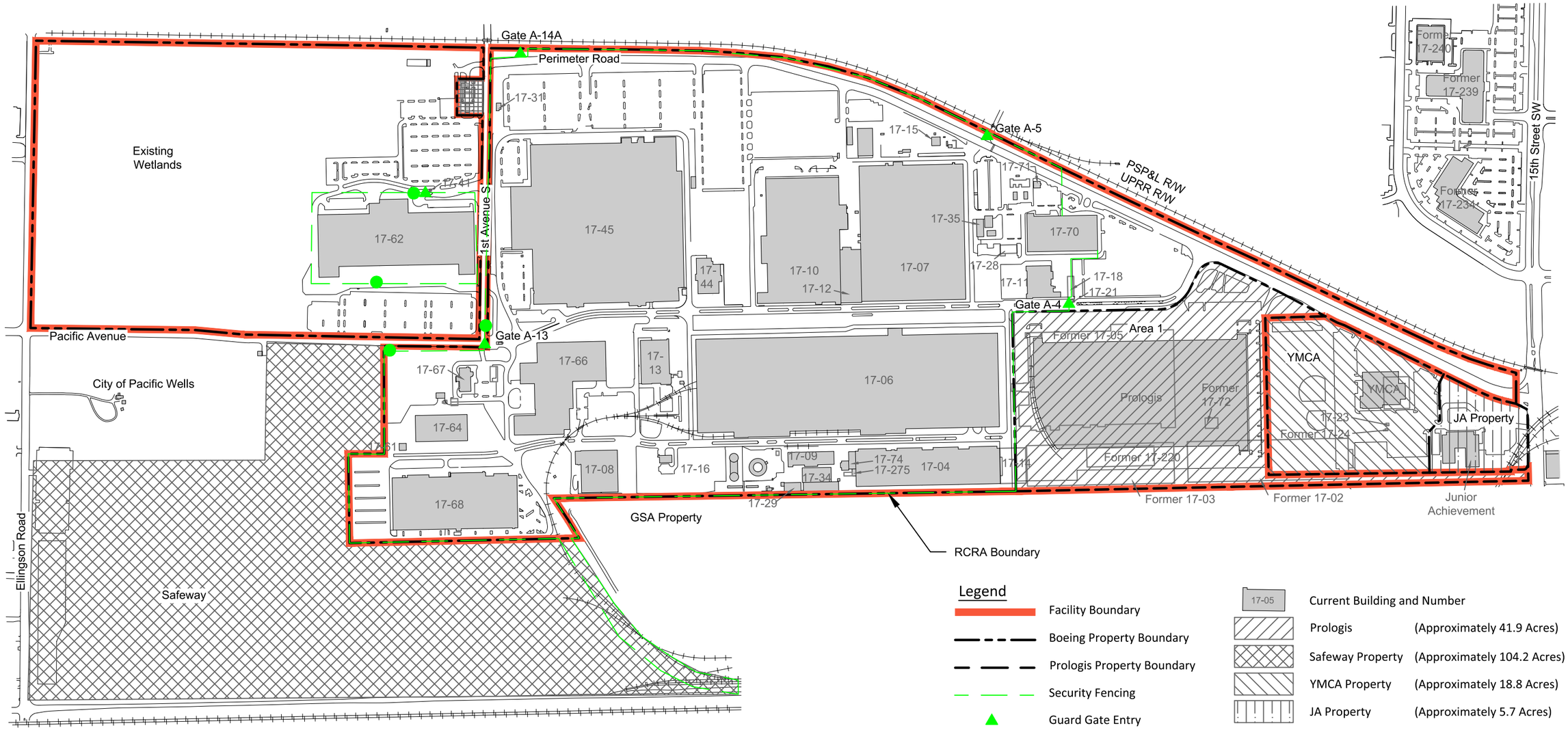


Legend

- Facility Boundary
- Boeing Property Boundary
- Prologis Property Boundary
- Security Fencing
- Guard Gate Entry
- Badge Reader Entry
- 17-05 Current Building and Number
- Prologis (Approximately 41.9 Acres)
- Safeway Property (Approximately 104.2 Acres)
- YMCA Property (Approximately 18.8 Acres)
- JA Property (Approximately 5.7 Acres)
- PSE Property (Approximately 0.71 Acres)

Base map source: Geomatrix 2003

Note

1. Former Building Numbers 17-234, 17-239 and 17-240 are currently owned by Fana.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

N

0 600 1200

Scale in Feet

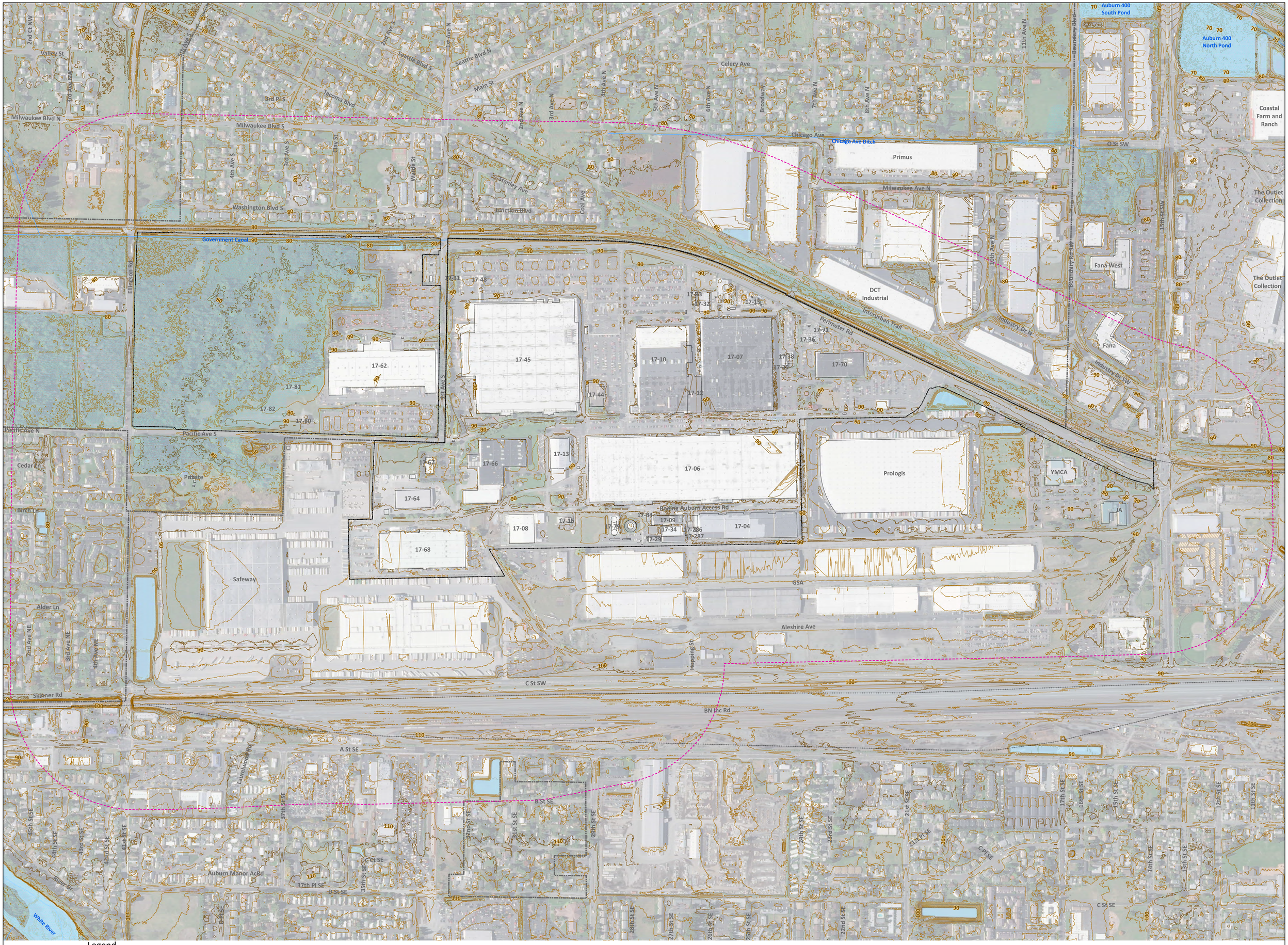
LANDAU ASSOCIATES

Boeing Auburn Facility
Auburn, Washington

Facility Layout

Figure
B-2

Boeing\Remedial Investigation Report | G:\Projects\025\164\150\501\RCRA Permit Section B\FB-02FacilityLayout.dwg (A) "Figure 1-3" 3/15/2018



Legend

- Boeing Property
- 1,000-ft Site Buffer
- City Limits
- 2-ft Contours
- 10-ft Contours
- Water Bodies
- Wetland Areas
- Waterways

0 200 400

Scale in Feet

N

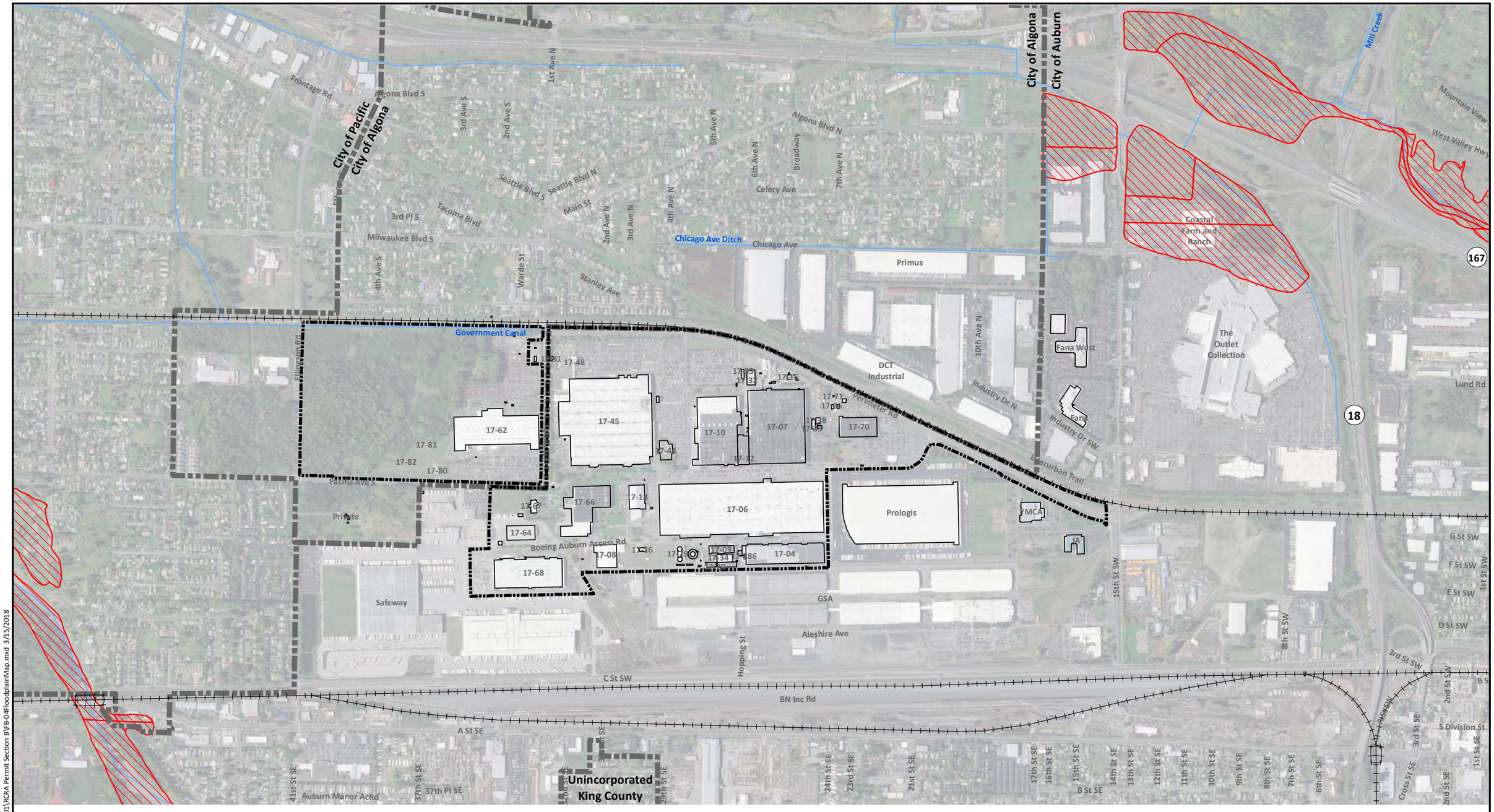
Data Sources: Puget Sound Lidar Consortium; Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn Facility
Auburn, Washington

Site Topographic Map

Figure
B-3



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Legend

- City Limits
- Boeing Property
- 100-Year Floodplain

0 1,000 2,000

Scale in Feet

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

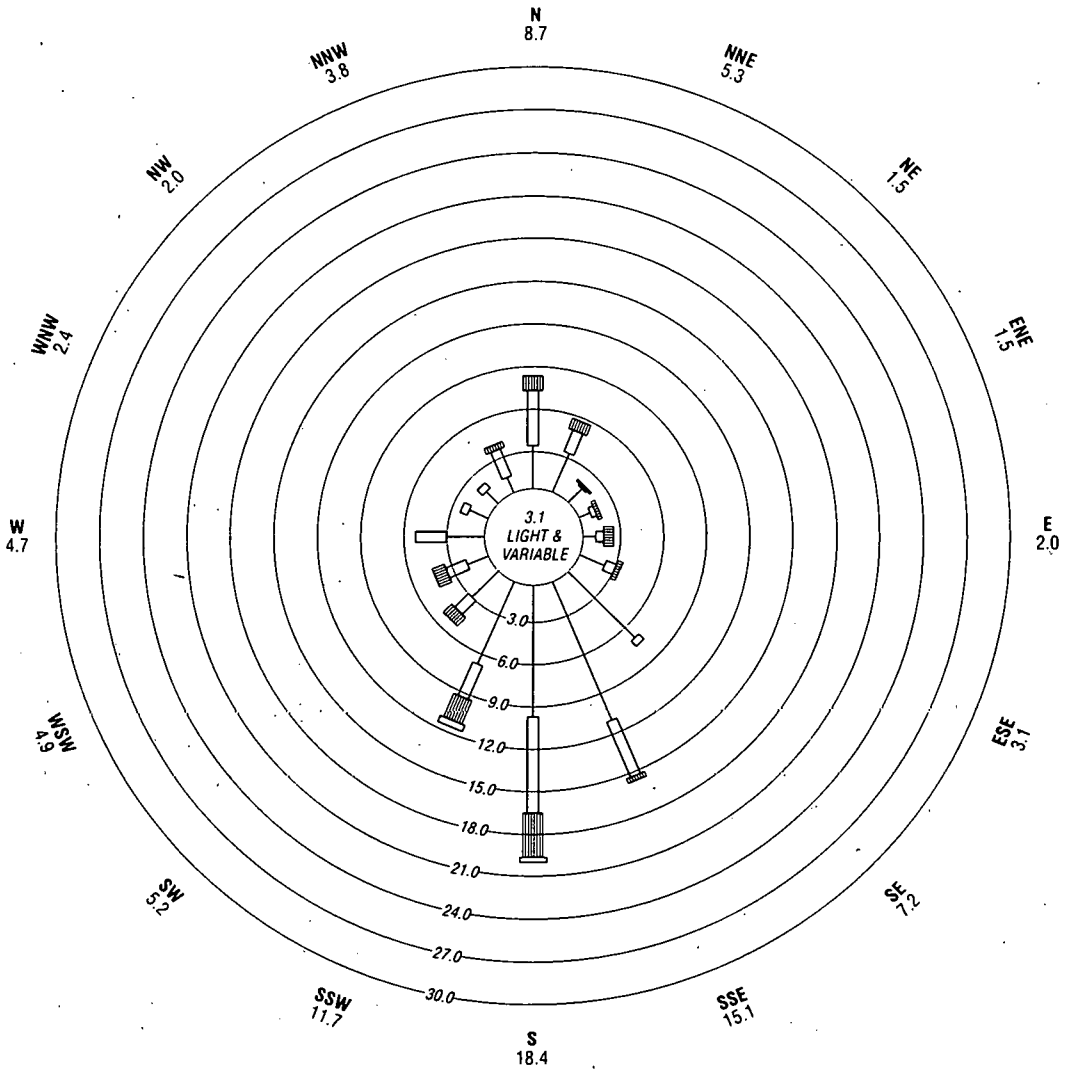
N

Data Sources: FEMA; King County GIS; Esri World Imagery.

LANDAU ASSOCIATES

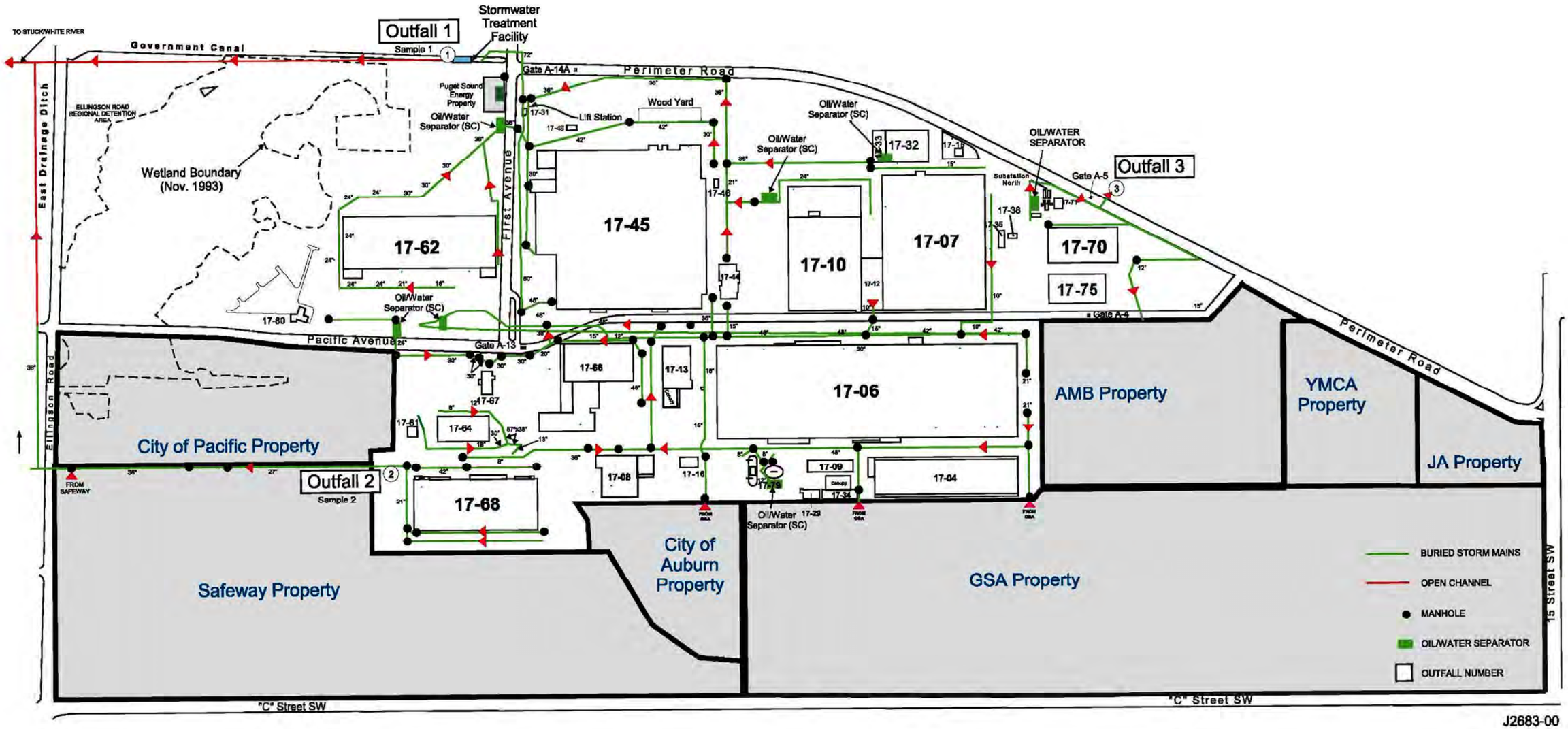
Boeing Auburn Facility Auburn, Washington	**Floodplain Map**	Figure B-4

145519.PB.01 • Boeing-Auburn Part B • B09_WindRose • 9.15.98 • BI



Station location: **Puget Sound Air Pollution Control Agency**
James Street and Central Avenue
Kent, Washington
Inclusive dates: **All months, 1996**
Total observations: **8,756**

Boeing Auburn Facility Auburn, Washington	**Wind Direction Summary**	Figure **B-5**



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LANDAU ASSOCIATES

N

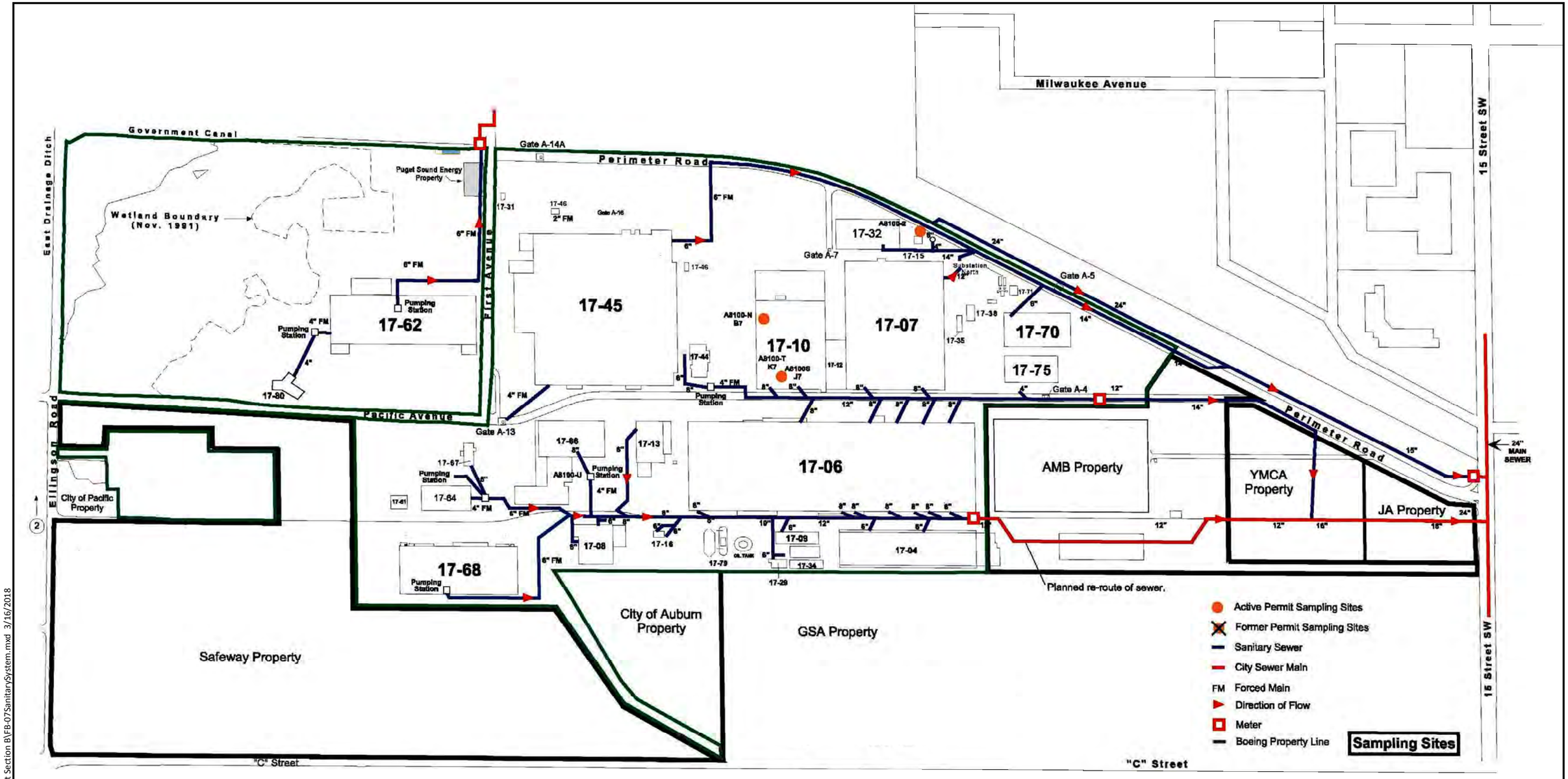
0 600 1,200

Scale in Feet

Boeing Auburn Facility
Auburn, Washington

Storm Drainage Plan

Figure
B-6



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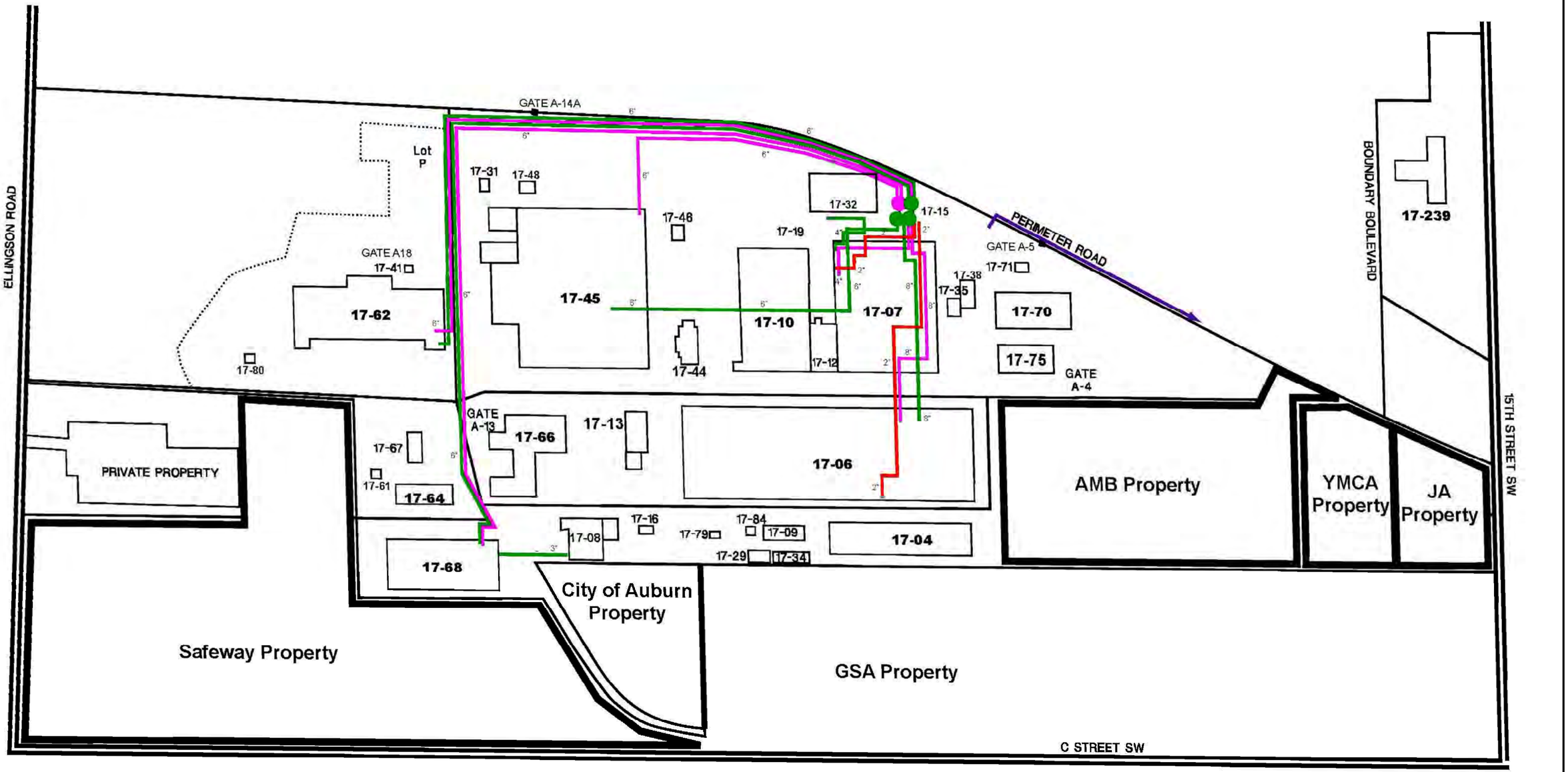
LANDAU ASSOCIATES

N

0 600 1,200

Scale in Feet

Boeing Auburn Facility Auburn, Washington	**Sanitary Sewer Plan**	Figure B-7



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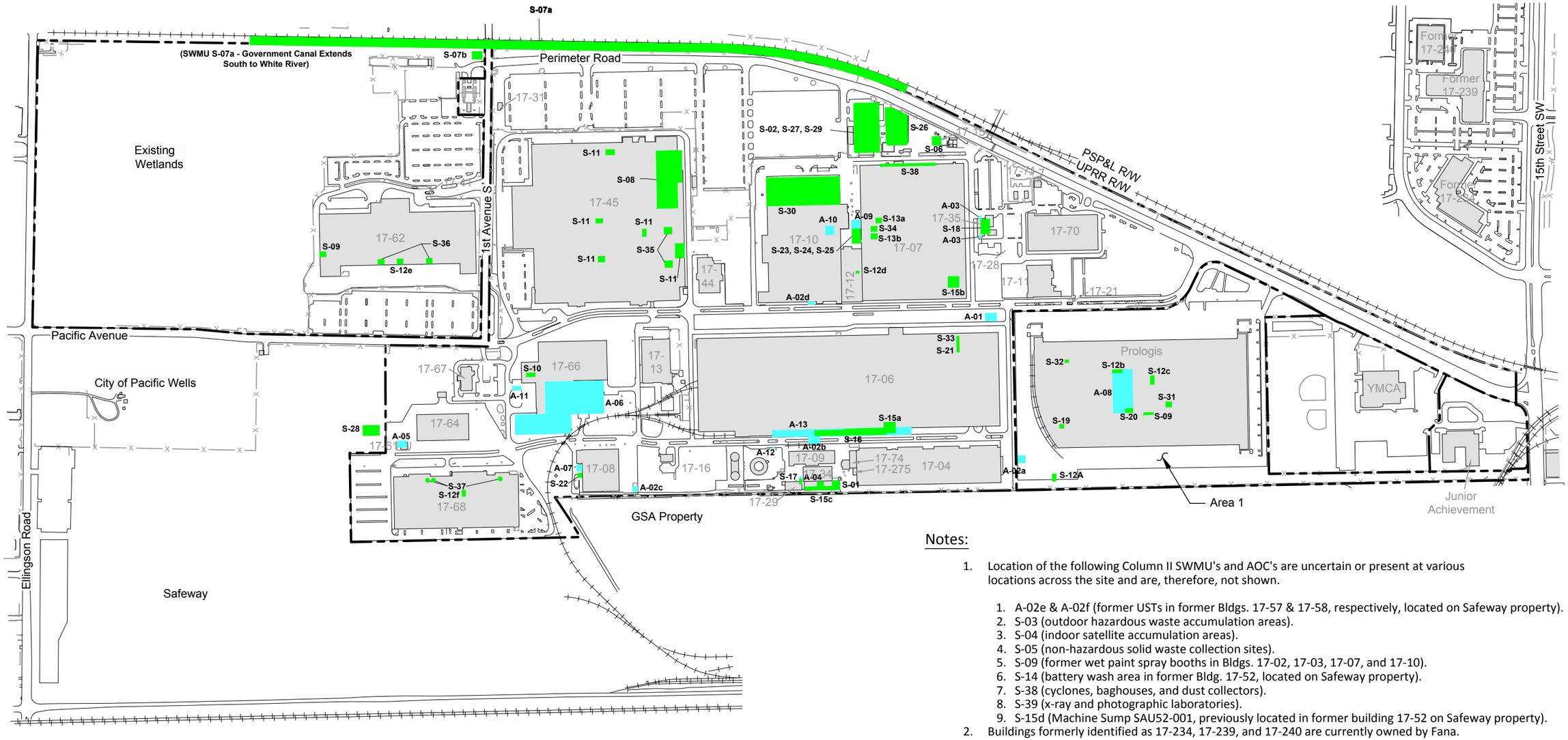
LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**Industrial Wastewater Plan**	Figure B-8



Notes:

1. Location of the following Column II SWMU's and AOC's are uncertain or present at various locations across the site and are, therefore, not shown.
    1. A-02e & A-02f (former USTs in former Bldgs. 17-57 & 17-58, respectively, located on Safeway property).
    2. S-03 (outdoor hazardous waste accumulation areas).
    3. S-04 (indoor satellite accumulation areas).
    4. S-05 (non-hazardous solid waste collection sites).
    5. S-09 (former wet paint spray booths in Bldgs. 17-02, 17-03, 17-07, and 17-10).
    6. S-14 (battery wash area in former Bldg. 17-52, located on Safeway property).
    7. S-38 (cyclones, baghouses, and dust collectors).
    8. S-39 (x-ray and photographic laboratories).
    9. S-15d (Machine Sump SAU52-001, previously located in former building 17-52 on Safeway property).
2. Buildings formerly identified as 17-234, 17-239, and 17-240 are currently owned by Fana.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- S-28 — Solid Waste Management Unit (SWMU)
- A-05 — Area of Concern (AOC)
- 17-68 — Current Building and Number
- Property Boundary

N

0 600 1200

Scale in Feet

Base map source: Geomatrix 2003

LANDAU ASSOCIATES

Boeing Auburn Facility
Auburn, Washington

All Facility Solid Waste Management Units and Areas of Concern

Figure B-9

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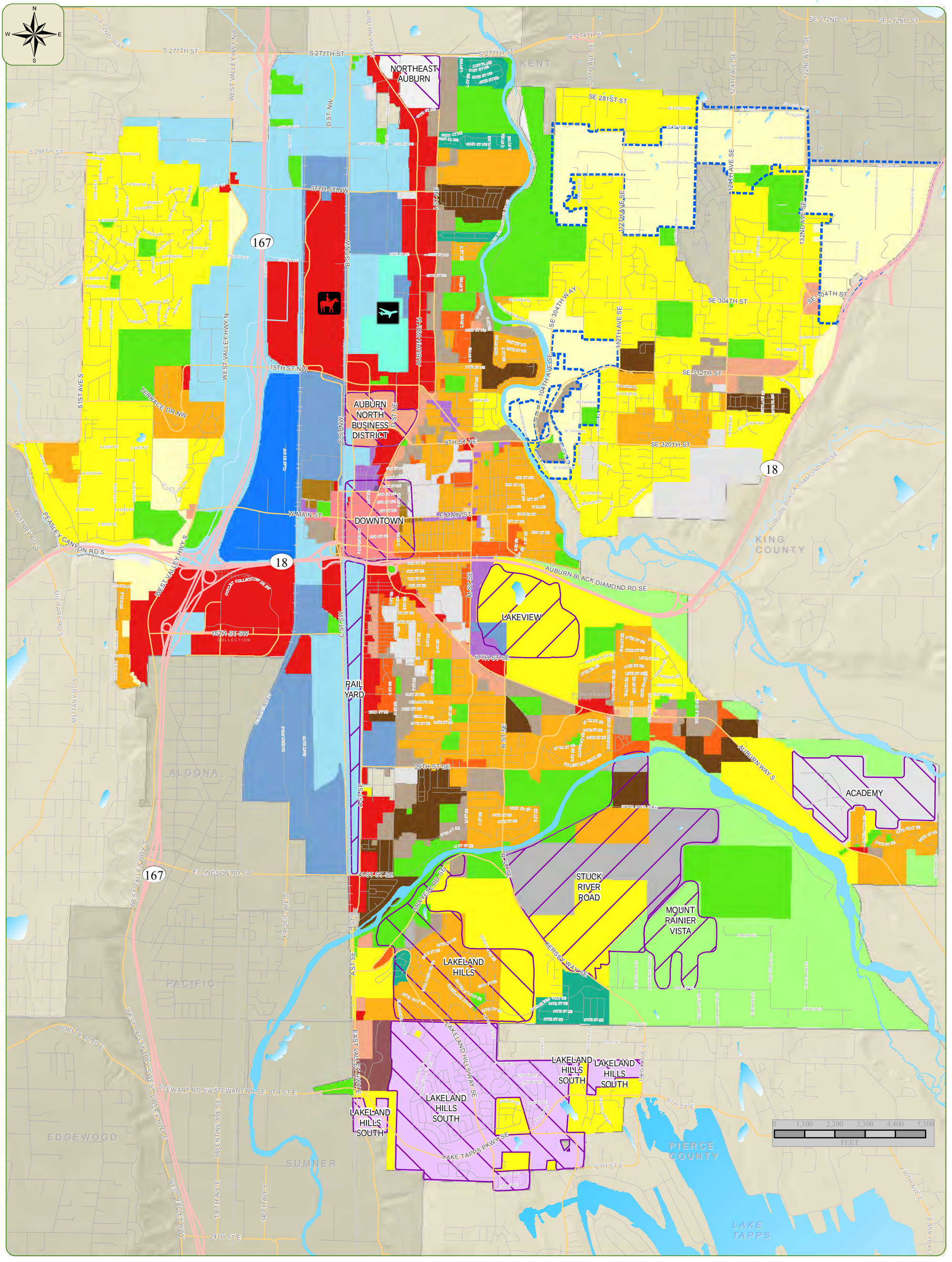
City of Auburn Comprehensive Zoning Map

CITY OF AUBURN WASHINGTON



Political Boundaries
- City of Auburn
- Surrounding Cities
- King and Pierce Counties

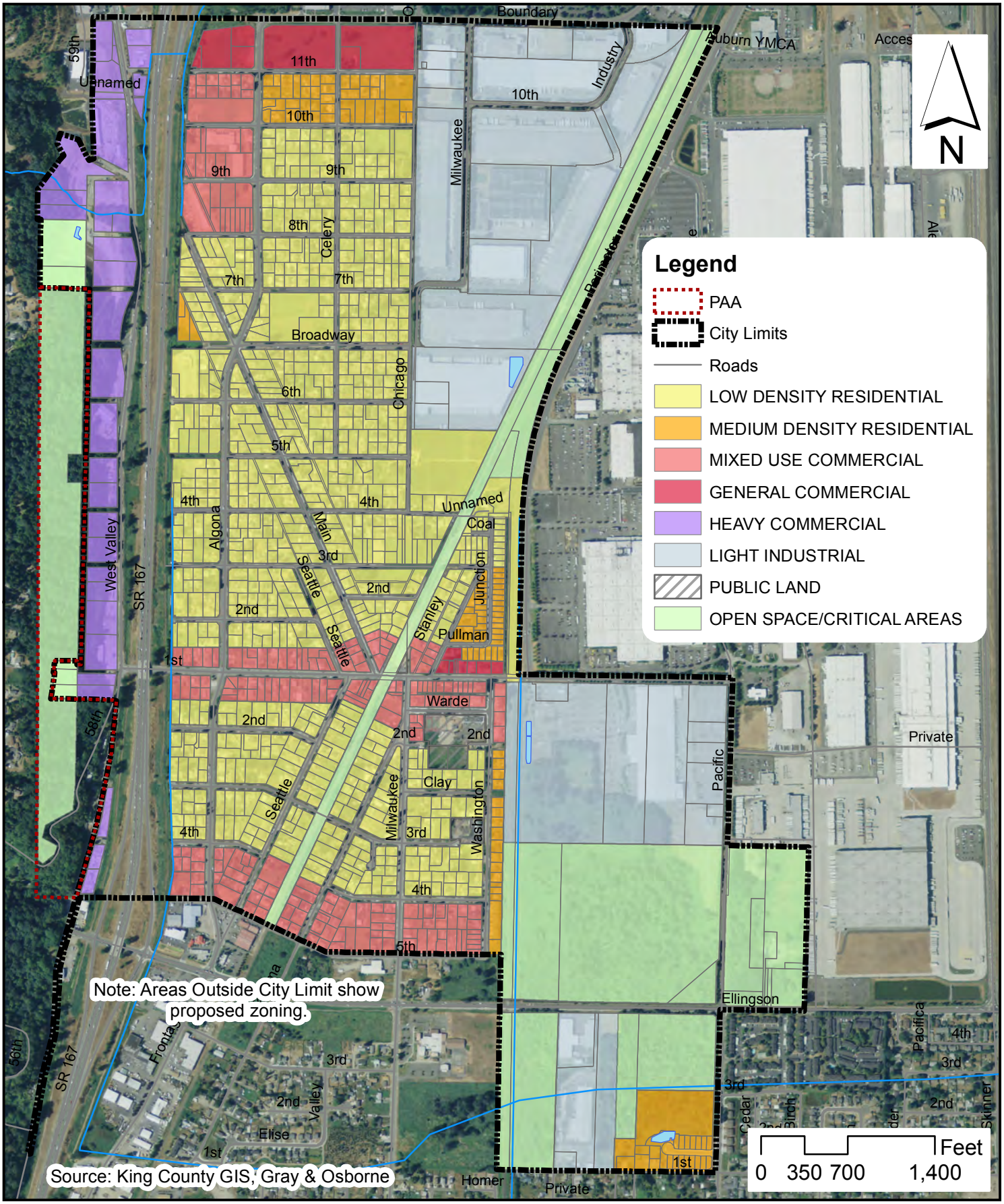
Transportation
- Arterials
- Highways
- Locals

Land Use Boundaries
- Urban Separators Overlay
- Adopted Special Plan Areas
- Proposed Special Plan Areas

Zoning Designations
- C1 Light Commercial District
- C2 Central Business District
- C3 Heavy Commercial District
- CN Neighborhood Shopping District
- DUC Downtown Urban Center
- EP Environmental Park District
- I Institutional Use District
- Lakeland Hills South PUD
- LF Airport Landing Field District
- M1 Light Industrial District
- M2 Heavy Industrial District
- P1 Public Use District
- PUD Planned Unit Development
- R1 Residential 1 DU/Acre
- R5 Residential 5 DU/Acre
- R7 Residential 7 DU/Acre
- R10 Residential 10 DU/Acre
- R20 Residential 20 DU/Acre
- Residential Conservency
- RMHC Residential Manufactured/Mobile Home Units
- RO Residential Office District
- RO-H Residential Office District (Hospital)
- TV Terrace View
- UNC Unclassified Use District

Boeing Auburn Facility Auburn, Washington	**Land Use Planning Map for the City of Auburn**	Figure B-10

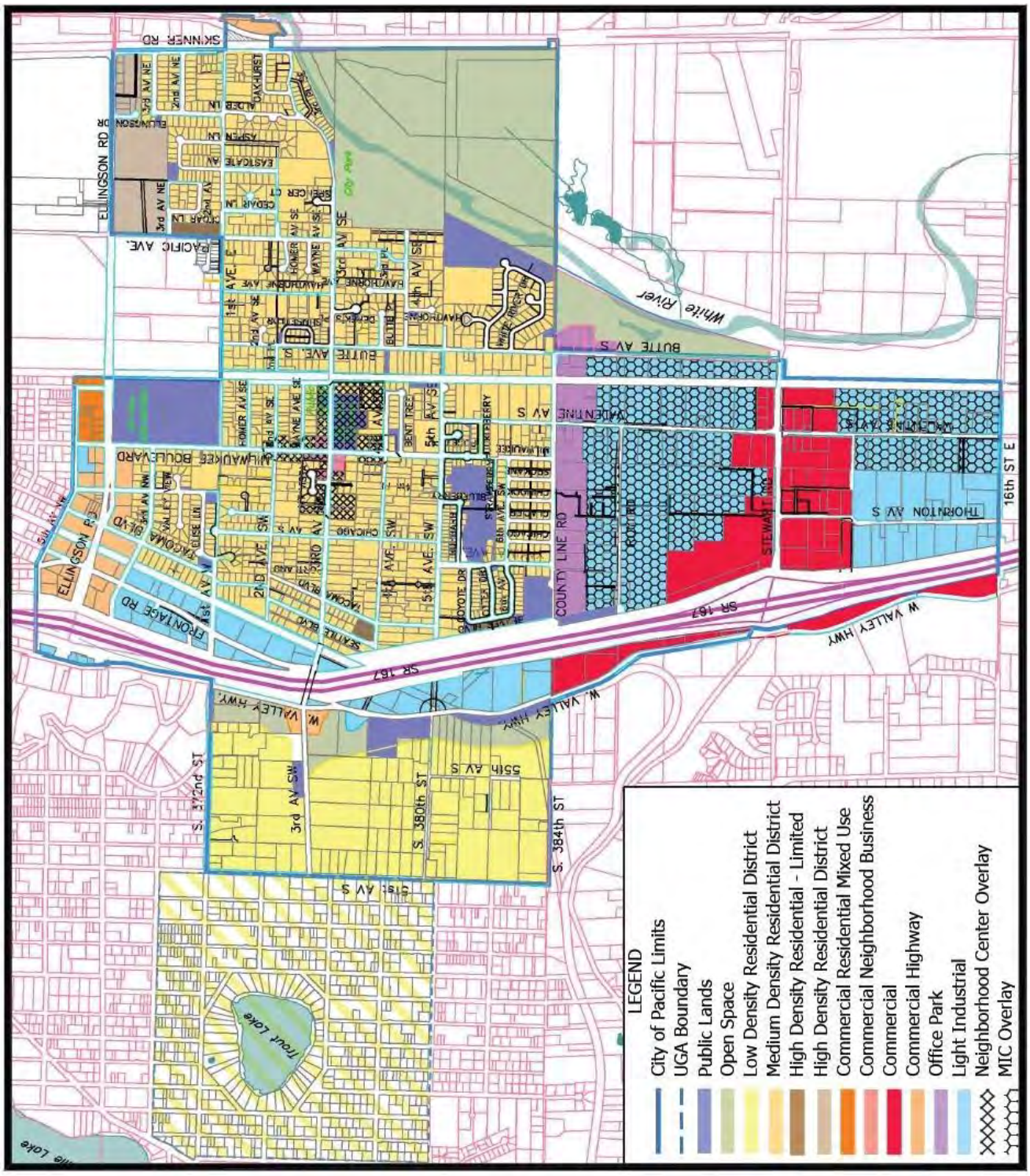
Printed On: 12/9/2016
Map ID: 3873



City of Algona

SHOCKEY PLANNING GROUP, Inc.

Boeing Auburn Facility Auburn, Washington	**Land Use Planning Map for the City of Algona**	Figure B-11



N

0 800 1,600

Scale in Feet

Boeing Auburn Facility Auburn, Washington	**Land Use Planning Map for the City of Pacific**	Figure B-12

1/26/2016

TABLE B-1
General Information

Name of Company:	Boeing Commercial Airplane Group
Name of Owner:	The Boeing Company
Facility Contact (Manager, Environmental Affairs):	Mike Verhaar
Facility Location:	700 15th Street SW, Auburn, WA 98002
Facility Mailing Address:	PO Box 3707 MC 5A-214, Seattle, WA 98124-2207
Telephone Number:	(206) 849-7696
County:	King
Latitude: **Longitude:**	Degrees: 47 Minutes: 17 Seconds: 46.28 Degrees: 122 Minutes: 14 Seconds: 9.60
EPA/State Identification Number:	WAD 041 337130
Size of Facility:	350 acres
Nominal Elevation of Plant:	88 ft NGVD (National Geodetic Vertical Datum)
Date Hazardous Waste Operations Started:	1967

TABLE B-2
Boeing Auburn Environmental Permits

Permit Type	Agency	Permit Number	Permit Date	Expiration Date
Hazardous Waste	EPA	WAD 041337130	04/07/2006	04/07/2016 (a)
Wastewater Discharge	KCDNR	METRO Wastewater Discharge Permit No. 7599-07	12/07/2015	12/6/2020
Stormwater Discharge	Ecology	Industrial Stormwater Permit No WAR -000221	1/2/2015	12/31/2019
Clean Air Act	PSCAA	PSCAA Registry No. 13117	2/2/2004(b)	2/2/2009 (c)
UST	Ecology	UST Registration No. 178-005-030 Tanks 27, 31, 32, 36	N/A (Business License)	8/31/208

Notes:

(a) This permit incorporates by reference the Agreed Order No. 01HWTRNR-3345. Permit reissuance is in progress with this application submittal, 2018.

(b) Initial permit date is listed with subsequent amendments as follows May 2004, June 2006, March 2010, November 2011, August 2015

(c) Initial expiration in 2009 with amendments made; Operations are permitted with amendments until finalized in a new updated permit in work. Auburn is legally able to operate in accordance to the current permit and its amendments. Boeing Auburn is currently awaiting negotiations.

Abbreviations/Acronyms:

Ecology = Washington State Department of Ecology
EPA = US Environmental Protection Agency
METRO = King County Department of Natural Resources
N/A = Not Applicable
PSAPCA = Puget Sound Air Pollution Control Agency
UST = Underground Storage Tank

TABLE B-3

Active Boeing Facility Air Permits

NOC No.	Description	Building	Dates	
			First Issue	Renewal
1991	Spray coating booths - dry filter	17-06	1979	N/A
2004	Dust collectors	17-06	1979	N/A
2096	Oven	17-07	1980	N/A
2876	Dust collector	17-68	1991	N/A
2886	430,000 gallon fuel oil storage tank	17-09	1966	N/A
3740	Dust collector	17-68	1991	N/A
3842	Boilers (12.6 MMBtu/hr, gas fired), ovens, scrubbers, spray coating booths (dry filter),	17-62	1992	N/A
4192	Dust collectors	17-06	1991	N/A
4684	Dust collector	17-07	1992	N/A
4685	Dust collectors	17-07	1992	N/A
4687	Dust collector	17-07	1993	N/A
4732	Spray coating booth – dry filter	17-66	1992	N/A
5092	Wet dust collector	17-06	1993	N/A
5404	Spray coating booth – dry filter	17-08	1994	N/A
5985	Particulate scrubber (salt bath)	17-62	1992	N/A
5986	Boilers (10.4 MMBtu.hr, gas fired)	17-66	1993	N/A
5987	Spray coating booth – dry filter	17-66	1993	N/A
6109	Scrubber	17-06	1995	N/A
6115	Dust collector	17-10	1996	N/A
6526	Scrubber	17-06	1996	N/A
6719	Dust collector	17-07	1997	N/A
6742	Mist eliminator	17-06	1997	N/A
6777	Dust collector	17-06	1998	N/A
7045	Scrubber	17-07	1997	N/A
7177	Dust collectors	17-06	1997	N/A
7183	Dust collector	17-07	1997	N/A
7263	Scrubber	17-07	1997	N/A
7264	Scrubber	17-68	1997	N/A
7271	Boiler #4 (95 MMBtu/hr, gas fired with low NOx burners)	17-09	1998	N/A
7279	Spray coating booths – dry filter	17-07	1998	N/A
7302	Spray coating booths – dry filter	17-45	1998	N/A
7332	Scrubber	17-07	1998	N/A
7591	Dust collector	17-66	1998	N/A
7613	Dust collector	17-07	1999	N/A
7635	Dust collector	17-07	1998	N/A
7639	Spray coating booth – dry filter (dry lube)	17-68	2000	N/A
7689	Spray coating booth – dry filter	17-45	1999	N/A
7941	Spray coating booth – dry filter	17-45	1999	N/A
7948	Dust collector	17-06	2000	N/A
7949	Dust collector	17-06	2000	N/A
7950	Dust collector	17-06	2000	N/A
8029	Dust collector, scrubbers, particulate scrubber, spray coating booths – dry filter,	17-45	1991	2007

TABLE B-3

Active Boeing Facility Air Permits

NOC No.	Description	Building	Dates	
			First Issue	Renewal
8082	Dust collector	17-07	2000	N/A
8506	Spray coating booths – dry filter	17-45	2002	N/A
8747	Spray coating booth – dry filter	17-45	2003	N/A
8835	Spray coating booth – dry filter	17-62	2003	N/A
9133	NO2 scrubber	17-62	2002	N/A
9134	NO2 scrubber	17-68	2002	N/A
9864/6760	Scrubber	17-08	1994	N/A
10014	Dust collector for plasma cutting	17-13	2009	N/A
10234	Spray coating booth – dry filter	17-68	2011	N/A
10304	Oven	17-45	2011	N/A
10332	Spray coating booths – dry filter	17-45	2011	N/A
10338	Gasoline station	17-64	1989	N/A
10497	Ovens	17-45	2012	N/A
10653	NO2 scrubber, acid scrubber	17-68	2015	N/A
10730	Autoclave burners	17-45	2015	N/A
10974	Laser	17-68	2015	N/A
11388/3587	Scrubbers, spray coating booths – dry filter	17-68	1991	N/A
552N IEU	Dust collectors	17-45	2008	N/A
8669/8029	Spray coating booth – dry filter	17-45	2002	N/A
Reg.	Boilers	17-09	1966	N/A
Reg.	Dust collectors	17-06	1979	N/A
Reg.	Dust collector	17-04	1967	N/A
Reg.	Dust collector	17-06	1980	N/A
Reg.	Process furnace	17-10	1966	N/A
Reg.	Spray coating booth – dry filter	17-04	1987	N/A
Reg	Spray coating booth – dry filter	17-07	1987	N/A

SECTION C: WASTE ANALYSIS

Section C describes characteristics and handling of waste associated with regulated units. All regulated units at the Boeing Auburn Facility have been closed and there are no active regulated units. Section C is not required.

SECTION D: PROCESS INFORMATION

Section D describes process information associated with regulated units. All regulated units at the Boeing Auburn Facility have been closed and there are no active regulated units. Section D is not required.

SECTION E: GROUNDWATER MONITORING

SECTIONS

TABLES

FIGURES

E-1 GENERAL HYDROGEOLOGIC INFORMATION

40 CFR 270.14(c)(2)

The Boeing Auburn Facility lies within the Auburn Valley formed during the Vashon glaciation approximately 14,000 years ago. Approximately 7,500 years ago, an eruption of Mount Rainier sent a large lahar (the Osceola Mudflow) down the valley. The Osceola Mudflow deposited a low porosity layer of sands and gravels suspended in a silt and clay matrix. This layer forms the aquitard below the present day upper alluvial aquifer of the valley.

The upper alluvial aquifer comprises deposits from the White and Green Rivers. The deposits consist of highly variable but predominantly coarse alluvial sands and gravels with occasional interbedded silt layers consistent with a relatively high energy, dynamic, alluvial depositional environment. Finer grained deposits and peat, indicative of a lower energy depositional environment are more prevalent in the northwest portion of the Boeing Auburn Facility (toward the valley wall), where smaller water

courses and overbank flooding probably contributed more significantly to the deposition. As a result, the northwest portion of the Boeing Auburn Facility generally has higher concentrations of organic carbon in the aquifer.

Contributions to groundwater in the upper aquifer primarily consists of infiltration from the White River with a smaller contribution from precipitation. In general, groundwater throughout the valley flows from the south (White River) to the north (Green River). Locally at the Boeing Auburn Facility, groundwater flow has a pronounced westerly component driven by groundwater discharge zones associated with stormwater features, wetlands, and Mill Creek to the northwest of Boeing property.

Groundwater velocities vary across the Boeing Auburn Facility due to the heterogeneity of the alluvial deposits. Seepage velocities across the Facility are estimated to average approximately 300 ft per year. These relatively high seepage velocities reflect the relatively high hydraulic conductivity of the alluvium and the high rates of recharge to the aquifer system due to infiltration from the White River.

Groundwater is generally shallow with groundwater depths near the Boeing Auburn Facility in the range of 8 to 22 ft below ground surface (bgs). In the northwest portion of the Boeing Auburn Facility, groundwater depths are shallower and generally range from 0 to 10 ft bgs. Differences in the depth of the water table across the Boeing Auburn Facility are primarily due to changes in ground surface elevation.

Seasonally, groundwater elevations fluctuate on average approximately 5 ft. Somewhat larger fluctuations are generally observed at the Boeing Auburn Facility and smaller fluctuations are generally observed in the northwest portion of the Boeing Auburn Facility where groundwater is also shallower.

Groundwater within the upper aquifer is divided into three zones: a shallow zone that ranges from the water table to 35 ft bgs, an intermediate zone that ranges from 35 to 75 ft bgs, and a deep zone that ranges from 75 ft bgs to the contact with the Osceola Mudflow (generally between 80 and 105 ft bgs).

A detailed description of the geology and hydrogeology in the vicinity of the Boeing Auburn Facility is provided in the RI Report (LAI 2017b).

E-2 CONTAMINANT PLUME DESCRIPTION

40 CFR 270.14(c)(2), (4), (7)

Two groundwater plumes emanate from beneath the northern portion of the Boeing Auburn Facility and extend off Boeing property to the north and northwest (Area 1 plume and Western plume). These plumes contain relatively low-level concentrations of the volatile organic compound (VOC) trichloroethene (TCE), and its breakdown products: cis-1,2-dichloroethene (cDCE), and vinyl chloride (VC). TCE and VC are the primary constituents of concern due to their relative toxicity and low cleanup

levels. The breakdown product cDCE is not a constituent of concern because the highest concentrations detected at the Boeing Auburn Facility are below the screening level of 16 micrograms per liter (µg/L). The plume geometries are relatively complex because of complex source histories, aquifer heterogeneity, and complex boundary conditions affecting groundwater flow. Contaminant distribution (TCE and VC) within the plumes is also relatively complex, primarily because aquifer heterogeneity and varying redox conditions affect degradation rates. A detailed description of the contaminant plumes is provided in the RI Report (LAI 2017b). TCE and VC plumes in the shallow, intermediate, and deep groundwater zones are presented on Figures E-1 through E-6.

E-3 GENERAL MONITORING PROGRAM REQUIREMENTS

40 CFR 270.14(c)(5); 264.90(b)(4); 264.97

Groundwater is monitored throughout the Boeing Auburn Facility under the current Phase 8 Interim Groundwater Monitoring Program (LAI 2018). The Phase 8 Groundwater monitoring program includes 269 active sampling points (i.e., well screens). The Phase 8 Groundwater monitoring program sampling schedule is presented in Table E-1. The current groundwater monitoring network is presented on Figure E-7.

E-3a Description of Wells

40 CFR 270.14(c)(6)(ii); 264.97(a), (b), (c)

Groundwater monitoring wells have been installed throughout the Boeing Auburn Facility to investigate individual SWMUs and AOCs along with groundwater contamination associated with the Boeing Auburn Facility. Not all monitoring well locations are currently included in the Phase 8 groundwater monitoring program, but all non-decommissioned wells are maintained for possible use. Monitoring well logs are presented in the RI Report (LAI 2017b). Wells were installed using hollow-stem auger, air-rotary, direct-push, or rotosonic drilling methods. Wells were constructed as either conventional PVC wells screened at one depth or as continuous multi-channel tubing (CMT) wells screened at multiple depths. Monitoring well details for current wells in the network are included in Table E-2.

E-3b Description of Sampling and Analysis Procedures

40 CFR 270.14(c)(7)(vi); 264.97(d), (e), (f); 264.99 (c) through (g)

Groundwater samples are collected from groundwater monitoring wells on a regular schedule (Table E-1). Wells are sampled using low-flow sampling techniques with a peristaltic pump or using passive diffusion bags. Sampling procedures at all wells include the collection of water level measurements. For wells where low-flow purge sampling is used, procedures also include measurement of field parameters (pH, temperature, turbidity, conductivity, and dissolved oxygen). Wells are purged at a low-flow rate until field parameter measurements have stabilized; samples are collected following

parameter stabilization. Samples requiring filtration (e.g., dissolved metals) are collected using an inline, high-volume, 0.45 micron, nitrocellulose filter. More detailed descriptions of the sample collection procedures are presented in the Site Sampling and Analysis Plan (LAI 2017c).

Sample analysis is provided by Washington State accredited laboratories. Analytical methods are provided on Table E-1. The Site Quality Assurance Project Plan provides details regarding analytical and quality assurance procedures (LAI 2017a). Groundwater sampling results are provided to Ecology on a quarterly basis as required under the AO.

E-4 CORRECTIVE ACTION PROGRAM

40 CFR 270.14(c)(8); 264.99(j); 264.100

The Boeing Auburn Facility is currently undergoing corrective action in accordance with the program set forth in the AO (Ecology 2006). The corrective action program for the Boeing Auburn Facility includes an RI (completed in 2017), a feasibility study (FS; currently underway), and a draft cleanup action plan (pending results of the FS). Ecology will issue a new AO or Consent Decree for implementation of the final cleanup action plan.

Attachment 4 of the AO presents a public participation plan intended to engage stakeholders and promote public understanding of the planning and remediation activities related to investigation and cleanup of hazardous substances at the Facility. The public participation plan is updated at least annually by Ecology and includes such activities as public comment periods for permits and major milestones of the corrective action process. The public participation plan also includes regular transmittals of progress reports and analytical data to stakeholders and dissemination of information at community events, and via various forms of mail and electronic mail.

The RI identified specific AOCs[2] requiring cleanup that have been carried forward to the FS. The FS will provide cleanup action alternatives for each area that requires cleanup. AOCs carried forward to the FS are detailed in Table E-3.

E-4a Characterization of Contaminated Groundwater

40 CFR 270.14(c)(8)(i)

Current concentrations of constituents of concern (TCE and VC) for each groundwater zone are presented in Figures E-1 through E-6. A detailed description of groundwater contaminant characterization is provided in the RI Report (LAI 2017b).

[2] There are no SWMUs that require corrective action; however, two SWMUs (S-15a and S-16) are combined into AOC A-13, which is being carried forward to the FS.

E-4b Concentration Limits

40 CFR 270.14(c)(8)(ii); 264.94; 264.100(a)(2)

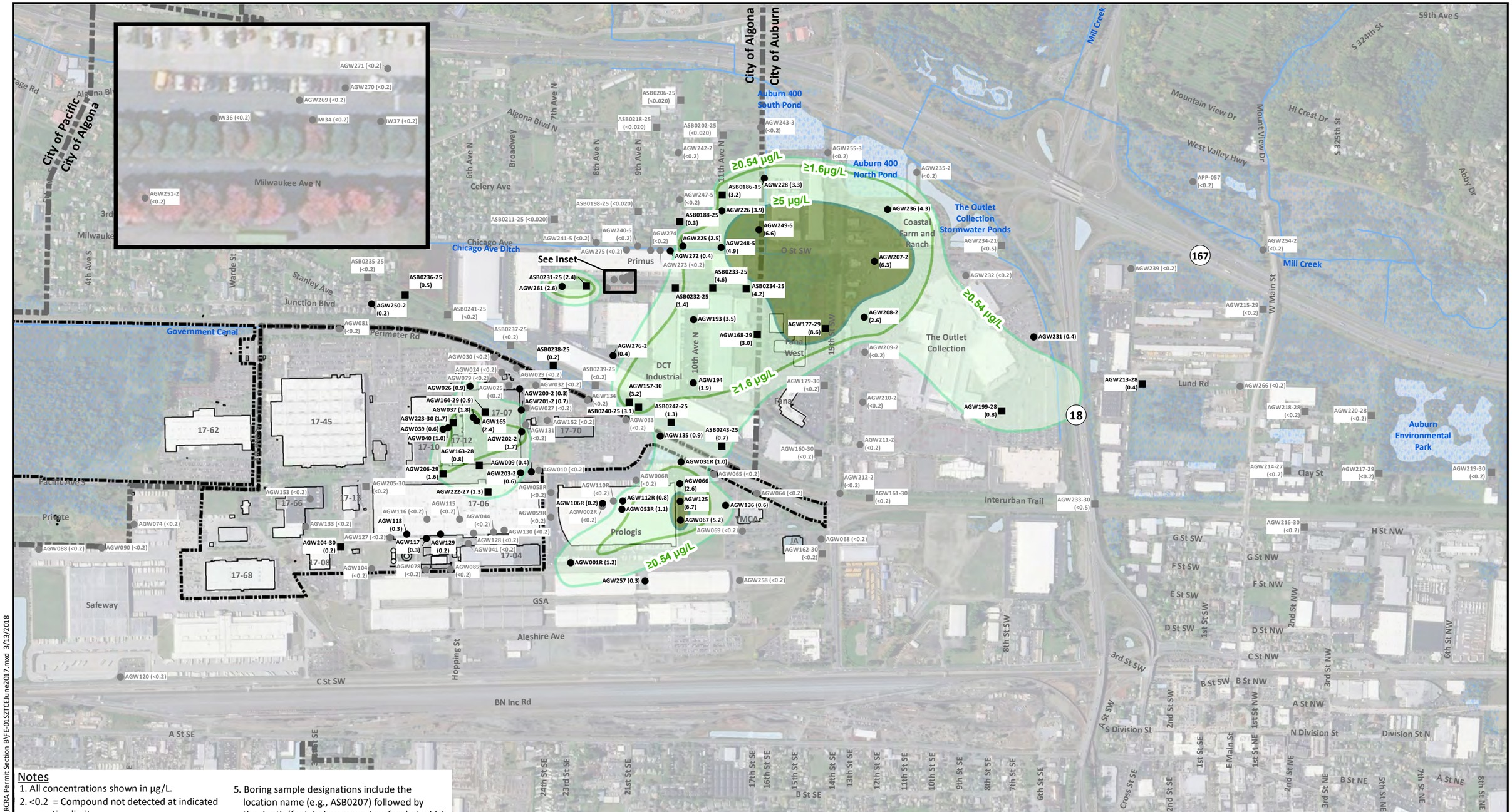
The RI report provided final screening levels for all constituents evaluated during the investigation (LAI 2017b). Final concentration limits (cleanup levels) for indicator hazardous substances will be proposed in the FS that is currently under development and will be promulgated in the final cleanup action plan.

E-4c Corrective Action Plan

40 CFR 270.14(c)(8)(iii); 264.100(b); 264.101

The corrective action plans for contamination emanating from the Boeing Auburn Facility are currently under development in the FS and future cleanup action plan. Specific SWMUs and AOCs identified for cleanup are discussed above in Section E-4b.

In addition to the corrective action plans under development, Boeing conducted an interim remedial action (IRA) in 2004 through 2005 to remediate the Area 1 plume source. The IRA consisted of injecting electron donor amendments into the subsurface to enhance reductive dechlorination of TCE. The IRA was effective in reducing source area concentrations of TCE and breakdown products. TCE shallow zone groundwater concentrations at the Area 1 source are currently below the analytical detection limit. Continued slow declines in VOC concentrations in wells located downgradient (north to northwest) of the source area are expected as natural aquifer flushing occurs. Details of the IRA are provided in the RI Report (LAI 2017b).



Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (≥5.0 µg/L)
- TCE Contour (≥1.6 µg/L)
- TCE Contour (≥0.54 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**Shallow Zone TCE Concentrations Most Recent – June 2017**	Figure **E-1**

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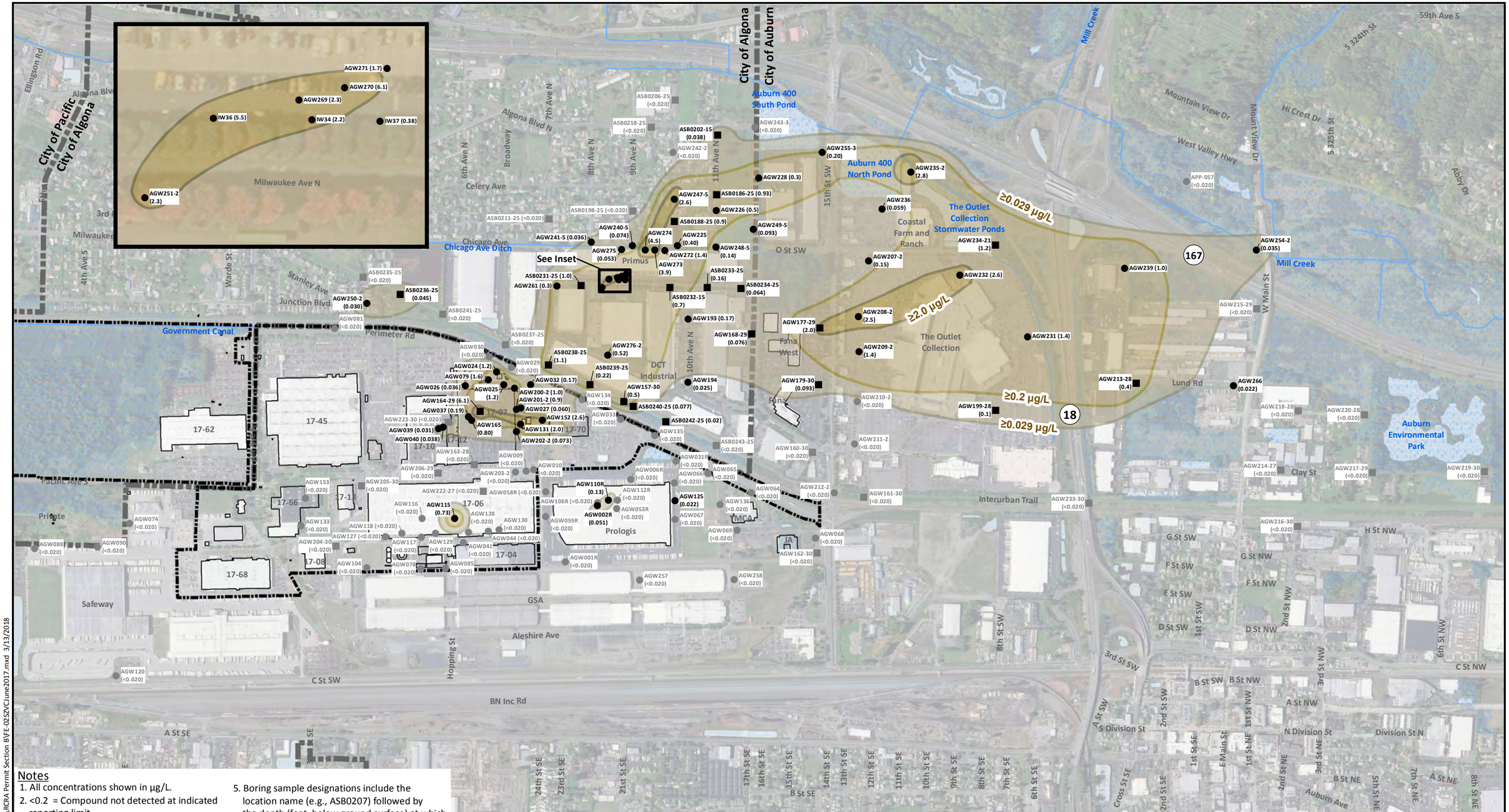

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (≥2.0 µg/L)
- Vinyl Chloride Contour (≥0.2 µg/L)
- Vinyl Chloride Contour (≥0.029 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn Facility
Auburn, Washington

Shallow Zone
Vinyl Chloride Concentrations
Most Recent – June 2017

Figure
E-2

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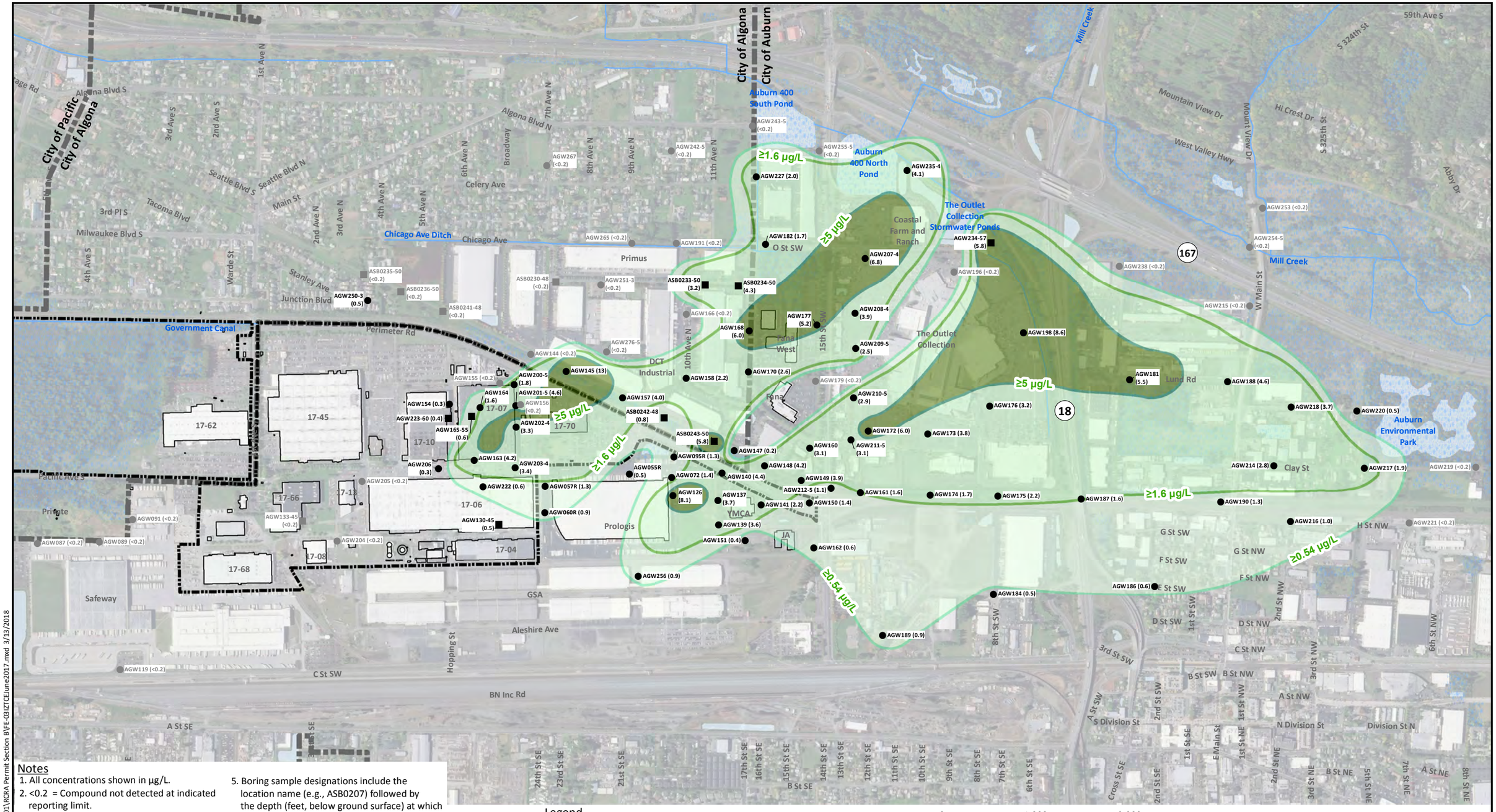

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (≥5.0 µg/L)
- TCE Contour (≥1.6 µg/L)
- TCE Contour (≥0.54 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

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LANDAU ASSOCIATES

Boeing Auburn Facility
Auburn, Washington

Intermediate Zone
TCE Concentrations
Most Recent – June 2017

Figure
E-3

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (≥2.0 µg/L)
- Vinyl Chloride Contour (≥0.2 µg/L)
- Vinyl Chloride Contour (≥0.029 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

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Boeing Auburn Facility Auburn, Washington	**Intermediate Zone Vinyl Chloride Concentrations Most Recent – June 2017**	Figure E-4

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Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (≥5.0 µg/L)
- TCE Contour (≥1.6 µg/L)
- TCE Contour (≥0.54 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**Deep Zone** **TCE Concentrations** **Most Recent – June 2017**	Figure **E-5**

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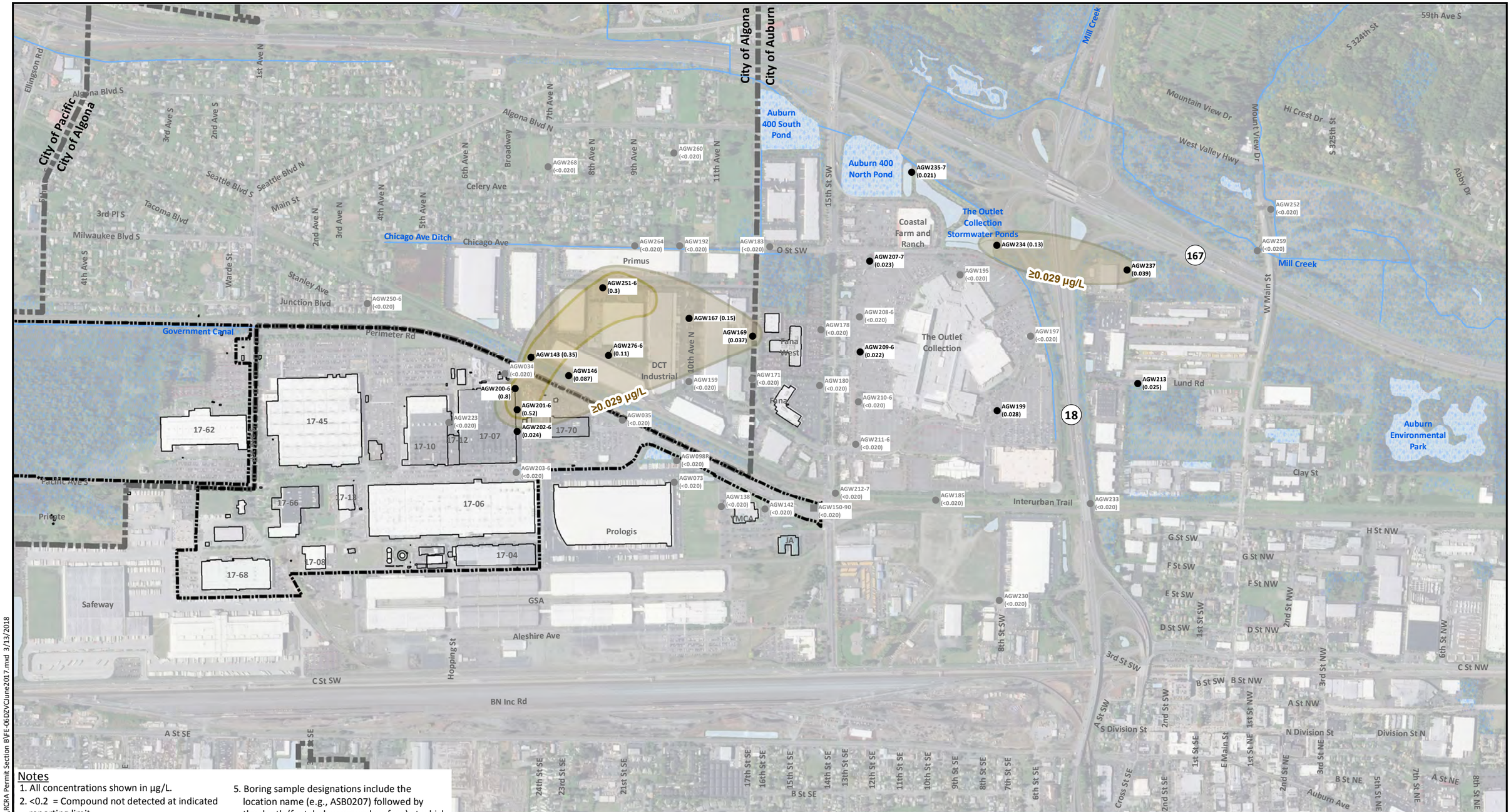

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (≥2.0 µg/L)
- Vinyl Chloride Contour (≥0.2 µg/L)
- Vinyl Chloride Contour (≥0.029 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

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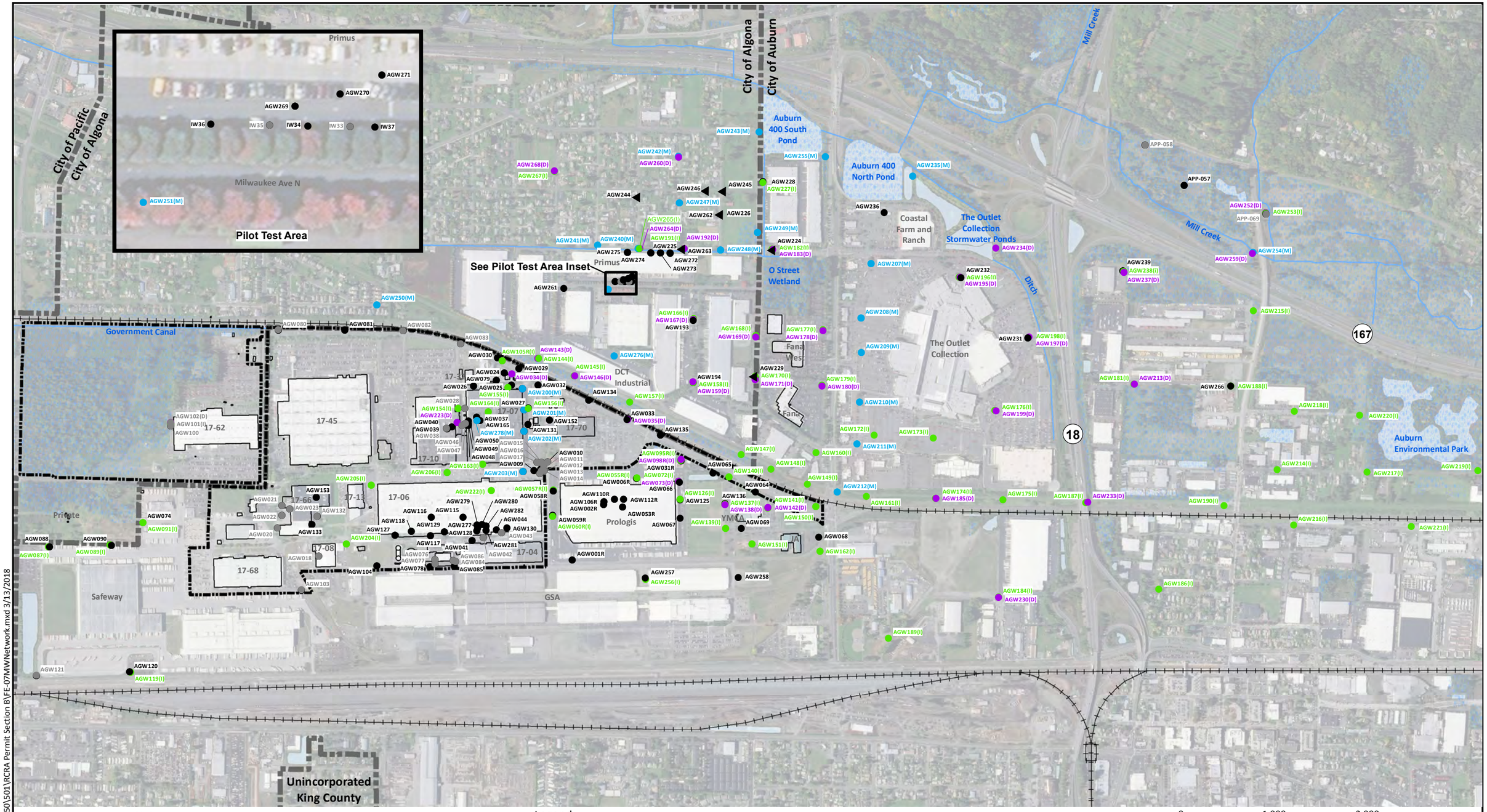
LANDAU ASSOCIATES

Boeing Auburn Facility
Auburn, Washington

Deep Zone
Vinyl Chloride Concentrations
Most Recent – June 2017

Figure
E-6



Notes

1. Groundwater wells are identified by the AGW prefix. The designations behind the identifications indicate the zone. If there is no designation, the well is screened in the shallow zone. (I) = intermediate zone, (D) = deep zone, (M) = multi-level well; screens in multiple groundwater zones.
2. Well designations beginning with APP are installed and owned by WSDOT.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Offsite Water Table Well
- Shallow Monitoring Well (2 to 30 ft bgs)
- (I) Intermediate Monitoring Well (40 to 60 ft bgs)
- (D) Deep Monitoring Well (80 to 100 ft bgs)
- (M) Multi-Level Well
- Wells Not Currently Sampled
- Wetland Areas
- Water Bodies
- Waterways

N

0 1,000 2,000

Scale in Feet

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**Current Monitoring Well Network**	Figure E-7

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TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW001R	S	S End of Area 1	SE of Prologis Bldg	SA	X							PDB
AGW002R	S	Area 1	In Prologis Bldg	SA	X	X						LF
AGW006R	S	Area 1	W of Prologis Bldg	SA	X							PDB
AGW009	S	AOC A-01	NW of Bldg 17-06	A	X							PDB
AGW010	S	AOC A-01	NW of Bldg 17-06	SA	X				X	X	X	LF
AGW024	S	SWMU S-06/Bldg 17-15	WWPTP	SA	X							PDB
AGW025	S	SWMU S-06/Bldg 17-15	E of WWPTP	SA	X							PDB
AGW026	S	Outside of Bldg 17-07	W of Bldg 17-07	SA	X							PDB
AGW027	S	Outside of Bldg 17-07	N of Bldg 17-07	SA	X							PDB
AGW029	S	Property Boundary	W of WWPTP	A	X							PDB
AGW030	S	Property Boundary	W of WWPTP	A	X							PDB
AGW031R	S	Property Boundary	NW of Prologis Bldg	SA	X							PDB
AGW032	S	Property Boundary	N of WWPTP	SA	X							PDB
AGW033	S	Property Boundary	N of Bldg 17-70	SA	X							PDB
AGW034	D	Property Boundary	WWPTP	A	X							PDB
AGW035	D	Property Boundary	N of Bldg 17-70	A	X							PDB
AGW037	S	Bldg 17-07-SWMU S-13	S Part of Bldg 17-07	SA	X			X				PDB/LF
AGW039	S	AOC A-10	N Part of Bldg 17-10	A	X		As					LF
AGW040	S	AOC A-10	N Part of Bldg 17-10	A	X							PDB
AGW041	S	Bldg 17-06-AOC A-13	E of Bldg 17-06	A	X							PDB
AGW044	S	Bldg 17-06-AOC A-13	Bldg 17-06; Col E10	A	X				X			LF
AGW047	S	Acid Scrubber-AOC A-09	Scrubber Alley outside of Bldg 17-07	SA				X				LF
AGW048	S	Acid Scrubber-AOC A-09	Between Bldgs 17-07 and 17-10	A			Cd, Ni	X				LF
AGW049	S	Acid Scrubber-AOC A-09	Between Bldgs 17-07 and 17-10	SA			Cd, Ni, Cu	X				LF
AGW050	S	Acid Scrubber-AOC A-09	Between Bldgs 17-07 and 17-10	SA			Cd, Ni	X				LF
AGW053R	S	Area 1	In Prologis Bldg	SA	X							PDB

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW055R	I	Area 1	W of Prologis Bldg	SA	X							PDB
AGW057R	I	S End of Area 1	S of Prologis Bldg	SA	X							PDB
AGW058R	S	S End of Area 1	S of Prologis Bldg	A	X							PDB
AGW059R	S	S End of Area 1	S of Prologis Bldg	A	X							PDB
AGW060R	I	S End of Area 1	S of Prologis Bldg	SA	X							PDB
AGW064	S	Area 1	W of YMCA Bldg	SA	X							PDB
AGW065	S	Area 1	SW of YMCA Bldg	A	X							PDB
AGW066	S	Area 1	N of Prologis Bldg	SA	X							PDB
AGW067	S	Area 1	N of Prologis Bldg	SA	X							PDB
AGW068	S	Area 1	N End of YMCA/JA	A	X							PDB
AGW069	S	Area 1	E of YMCA Bldg	SA	X							PDB
AGW072	I	Area 1	NW of Prologis Bldg	SA	X							PDB
AGW073	D	Area 1	NW of Prologis Bldg	SA	X							PDB
AGW074	S	Sentry	N of City of Pacific Wells	SA	X							PDB
AGW078	S	Property Boundary	Building 17-34 S	A	X							PDB
AGW079	S	SWMU S-06	S of Bldg 17-15	SA	X							PDB
AGW081	S	Property Boundary	Perimeter Rd W of Bldg 17-45	A	X							PDB
AGW085	S	Property Boundary	E of Bldg 17-34	SA	X							PDB
AGW087	I	Sentry	E of City of Pacific Wells	SA	X							PDB
AGW088	S	Sentry	E of City of Pacific Wells	SA	X							PDB
AGW089	I	Sentry	NE of City of Pacific Wells	SA	X							PDB
AGW090	S	Sentry	NE of City of Pacific Wells	SA	X							PDB
AGW091	I	Sentry	N of City of Pacific Wells	SA	X							PDB
AGW095R	I	Area 1	NW of Prologis Bldg	SA	X							PDB
AGW098R	D	Area 1	NW of Prologis Bldg	SA	X							PDB
AGW104	S	Property Boundary	Former Bldg 17-16	A	X							PDB

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW105R	I	Property Boundary	Perimeter Rd W of WWPTP	SA	X							PDB
AGW106R	S	Area 1	In Prologis Bldg	SA	X	X						LF
AGW110R	S	Area 1	In Prologis Bldg	SA	X	X						LF
AGW112R	S	Area 1	In Prologis Bldg	SA	X							PDB
AGW115	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X							PDB
AGW116	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X							PDB
AGW117	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X							PDB
AGW118	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X							PDB
AGW119	I	Safeway	E Side of Safeway Prop.	SA	X							PDB
AGW120	S	Safeway	E Side of Safeway Prop.	SA	X							PDB
AGW125	S	Area 1	N of Prologis Bldg	SA	X							PDB
AGW126	I	Area 1	N of Prologis Bldg	SA	X							LF
AGW127	S	Bldg 17-06-AOC A-13	In Bldg 17-06	A	X							PDB
AGW128	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X				X			LF
AGW129	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X							PDB
AGW130	S	Bldg 17-06-AOC A-13	In Bldg 17-06	SA	X				X			LF
AGW131	S	SWMU S-18/Bldg 17-35	N of Bldg 17-07	SA	X							PDB
AGW133	S	AOC A-06	E of Bldg 17-66	A	X							PDB
AGW134	S	Property Boundary	Perimeter Rd W of Bldg 17-70	SA	X							PDB
AGW135	S	Property Boundary	Perimeter Rd N of Bldg 17-70	SA	X							PDB
AGW136	S	Area 1	S of YMCA Bldg	SA	X							PDB
AGW137	I	Area 1	S of YMCA Bldg	SA	X							PDB
AGW138	D	Area 1	S of YMCA Bldg	SA	X							PDB
AGW139	I	Area 1	SE of YMCA Bldg	SA	X							PDB
AGW140	I	Area 1	SW of YMCA Bldg	SA	X							PDB
AGW141	I	Area 1	N of YMCA Bldg	SA	X							PDB

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW142	D	Area 1	N of YMCA Bldg	SA	X							PDB
AGW143	D	Offsite	Interurban Trail, NW of WWPTP	SA	X							PDB
AGW144	I	Offsite	Interurban Trail, NW of WWPTP	SA	X							PDB
AGW145	I	Offsite	Interurban Trail, NW of WWPTP	SA	X							PDB
AGW146	D	Offsite	Interurban Trail, NW of WWPTP	SA	X							PDB
AGW147	I	Offsite	Interurban Trail, W of YMCA/JA	SA	X							PDB
AGW148	I	Offsite	Interurban Trail, W of YMCA/JA	SA	X							PDB
AGW149	I	Offsite	Interurban Trail, W of YMCA/JA	SA	X							PDB
AGW150	I	Offsite	W of YMCA/JA	SA	X							PDB
AGW151	I	Area 1	E of YMCA Bldg	SA	X							PDB
AGW152	S	SWMU S-18/Bldg 17-35	N of Bldg 17-07	SA	X							PDB
AGW153	S	AOC A-06	In Bldg 17-66	A	X							PDB
AGW154	I	S of Former Vapor Degreaser in Bldg 17-07	S of Bldg 17-07	SA	X							PDB
AGW155	I	W of Bldg 17-07	W of Bldg 17-07	SA	X							PDB
AGW156	I	N of Bldg 17-07	N of Bldg 17-07	SA	X							PDB
AGW157	I	Property Boundary	NW of Bldg 17-21	SA	X							PDB
AGW158	I	Offsite	10th St SW	SA	X							PDB
AGW159	D	Offsite	10th St SW	SA	X							PDB
AGW160	I	Offsite	W of YMCA/JA - Industry Dr	SA	X							PDB
AGW161	I	Offsite	Interurban Trail, N of 15th St SW	SA	X							PDB
AGW162	I	Offsite	NE corner of YMCA/JA	SA	X							PDB
AGW163	I	E of Bldg 17-07	E of 17-07, near large door	SA	X							PDB
AGW164	I	Inside Bldg 17-07-SWMU S-13	Bldg 17-07, near column A7	SA	X							PDB
AGW165	S	Inside Bldg 17-07-SWMU S-13	Bldg 17-07, near column B9	SA	X							PDB
AGW166	I	Offsite	10th St SW	SA	X							PDB
AGW167	D	Offsite	10th St SW	SA	X							PDB

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW168	I	Offsite	Boundary Blvd	SA	X							PDB
AGW169	D	Offsite	Boundary Blvd	SA	X							PDB
AGW170	I	Offsite	Boundary Blvd	SA	X							PDB
AGW171	D	Offsite	Boundary Blvd	SA	X							PDB
AGW172	I	Offsite	SE corner of Outlet Collection Lot	SA	X							PDB
AGW173	I	Offsite	E side of Outlet Collection Lot	SA	X							PDB
AGW174	I	Offsite	Interurban Trail, N of 15th St SW	SA	X							PDB
AGW175	I	Offsite	Interurban Trail, N of 15th St SW	SA	X							LF
AGW176	I	Offsite	NE corner of Outlet Collection Lot	SA	X							PDB
AGW177	I	Offsite	Western Fana Property	SA	X							PDB
AGW178	D	Offsite	Western Fana Property	SA	X							PDB
AGW179	I	Offsite	Eastern Fana Property	SA	X							PDB
AGW180	D	Offsite	Eastern Fana Property	SA	X							PDB
AGW181	I	Offsite	S end of Lund Rd	SA	X							PDB
AGW182	I	Offsite	O St at Boundary Blvd	SA	X							PDB
AGW183	D	Offsite	O St at Boundary Blvd	SA	X							PDB
AGW184	I	Offsite	8th St at cul-de-sac	SA	X							PDB
AGW185	D	Offsite	Interurban Trail E of Outlet Collection	SA	X							PDB
AGW186	I	Offsite	E St and 3rd	SA	X							PDB
AGW187	I	Offsite	Interurban Trail N side of SR 18	SA	X							PDB
AGW188	I	Offsite	Lund Rd at Main St	SA	X							LF
AGW189	I	Offsite	City of Auburn Maintenance Fac.	SA	X							PDB
AGW190	I	Offsite	Interurban Trail at Main St	SA	X							PDB
AGW191	I	Offsite	Chicago Ave and 10th Ave, Algona	SA	X							PDB
AGW192	D	Offsite	Chicago Ave and 10th Ave, Algona	SA	X							PDB
AGW193	S	Offsite	10th St SW, Algona	SA	X							PDB

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW194	S	Offsite	10th St SW, Algona	SA	X							PDB
AGW195	D	Offsite	Outlet Collection-delivery area, W side	SA	X							PDB
AGW196	I	Offsite	Outlet Collection-delivery area, W side	SA	X							PDB
AGW197	D	Offsite	Outlet Collection-W of Sam's Club	SA	X							PDB
AGW198	I	Offsite	Outlet Collection-W of Sam's Club	SA	X							PDB
AGW199	D	Offsite	Outlet Collection-N of Marshalls	SA	X							PDB
AGW200-2	S	On-site CMT	Outside Bldg 17-07 NW Corner	SA	X							LF
AGW200-5	I	On-site CMT	Outside Bldg 17-07 NW Corner	SA	X							LF
AGW200-6	D	On-site CMT	Outside Bldg 17-07 NW Corner	SA	X							LF
AGW201-2	S	On-site CMT	Outside Bldg 17-07 N Central	SA	X							LF
AGW201-5	I	On-site CMT	Outside Bldg 17-07 N Central	SA	X							LF
AGW201-6	D	On-site CMT	Outside Bldg 17-07 N Central	SA	X							LF
AGW202-2	S	On-site CMT	Outside Bldg 17-07 E Central	SA	X							LF
AGW202-4	I	On-site CMT	Outside Bldg 17-07 E Central	SA	X							LF
AGW202-6	D	On-site CMT	Outside Bldg 17-07 E Central	SA	X							LF
AGW203-2	S	On-site CMT	Staging area btwn Bldgs 17-07 and 17-06	SA	X							LF
AGW203-4	I	On-site CMT	Staging area btwn Bldgs 17-07 and 17-06	SA	X							LF
AGW203-6	D	On-site CMT	Staging area btwn Bldgs 17-07 and 17-06	SA	X							LF
AGW204	I	On-site	In grass NW of Bldg 17-08	A	X							PDB
AGW205	I	On-site	In pavement NW of Bldg 17-13	A	X							PDB
AGW206	I	On-site	In parking area E of Bldg 17-10	SA	X							PDB
AGW207-2	S	Offsite CMT	Outlet Collection parking lot SW corner	SA	X							LF
AGW207-4	I	Offsite CMT	Outlet Collection parking lot SW corner	SA	X							LF
AGW207-7	D	Offsite CMT	Outlet Collection parking lot SW corner	SA	X							LF
AGW208-2	S	Offsite CMT	Outlet Collection parking lot across from Taco Del Mar	SA	X							LF
AGW208-4	I	Offsite CMT	Outlet Collection parking lot across from Taco Del Mar	SA	X							LF

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW208-6	D	Offsite CMT	Outlet Collection parking lot across from Taco Del Mar	SA	X							LF
AGW209-2	S	Offsite CMT	Outlet Collection parking lot across from Starbucks	SA	X							LF
AGW209-5	I	Offsite CMT	Outlet Collection parking lot across from Starbucks	SA	X							LF
AGW209-6	D	Offsite CMT	Outlet Collection parking lot across from Starbucks	SA	X							LF
AGW210-2	S	Offsite CMT	Outlet Collection parking lot across from IHOP	A	X							LF
AGW210-5	I	Offsite CMT	Outlet Collection parking lot across from IHOP	SA	X							LF
AGW210-6	D	Offsite CMT	Outlet Collection parking lot across from IHOP	SA	X							LF
AGW211-2	S	Offsite CMT	Outlet Collection parking lot across from Red Robin	A	X							LF
AGW211-5	I	Offsite CMT	Outlet Collection parking lot across from Red Robin	SA	X							LF
AGW211-6	D	Offsite CMT	Outlet Collection parking lot across from Red Robin	SA	X							LF
AGW212-2	S	Offsite CMT	Interurban Trail at 15th St SW	A	X							LF
AGW212-5	I	Offsite CMT	Interurban Trail at 15th St SW	SA	X							LF
AGW212-7	D	Offsite CMT	Interurban Trail at 15th St SW	SA	X							LF
AGW213	D	Offsite	S End of Lund Rd	SA	X							PDB
AGW214	I	Offsite	S End of Clay St, W side of street in parking lane next to driveway	SA	X							LF
AGW215	I	Offsite	W Main St access Rd, N side of road	SA	X							LF
AGW216	I	Offsite	H St, intersection with 2nd St W side	SA	X							LF
AGW217	I	Offsite	Clay St, halfway up W side	SA	X							LF
AGW218	I	Offsite	Western Ave, W side, in grass next to sidewalk N of driveway	SA	X							LF
AGW219	I	Offsite	Clay St, W side of cul-de-sac at N end	SA	X							PDB
AGW220	I	Offsite	Western Ave, N end	SA	X							LF
AGW221	I	Offsite	H St instersection with 6th, W side in gravel	SA	X							LF
AGW222	I	On-site	In Bldg 17-06	SA	X							PDB
AGW223	D	On-site	Scrubber Alley	A	X							PDB
AGW224	S (WT)	Offsite	O St at Boundary Blvd	A	X							PDB
AGW225	S (WT)	Offsite	Chicago Ave and 10th Ave, Algona	SA	X	X						LF

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW226	S (WT)	Offsite	11th Ave, Algona	SA	X	X						LF
AGW227	I	Offsite	W end of Boundary Blvd	SA	X							PDB
AGW228	S	Offsite	W end of Boundary Blvd	SA	X							LF
AGW229	S (WT)	Offsite	Boundary Blvd	SA	X							PDB
AGW230	D	Offsite	8th St at cul-de-sac	SA	X							PDB
AGW231	S	Offsite	Outlet Collection-N of Marshalls	SA	X							PDB
AGW232	S	Offsite	Outlet Collection-delivery area, W side	SA	X							PDB
AGW233	D	Offsite	Interurban Trail N side of SR 18	SA	X							PDB
AGW234	D	Offsite	Access road to Outlet Collection stormwater ponds	SA	X							PDB
AGW235-2	S	Offsite CMT	Access road to Outlet Collection stormwater ponds	SA	X							LF
AGW235-4	I	Offsite CMT	Access road to Outlet Collection stormwater ponds	SA	X							LF
AGW235-7	D	Offsite CMT	Access road to Outlet Collection stormwater ponds	SA	X							LF
AGW236	S	Offsite	Coastal Farm & Ranch Parking Lot	SA	X							LF
AGW237	D	Offsite	Auburn School District, NW corner of property	SA	X							PDB
AGW238	I	Offsite	Auburn School District, NW corner of property	SA	X							PDB
AGW239	S	Offsite	Auburn School District, NW corner of property	SA	X							LF
AGW240-1	S (WT)	Offsite CMT	Chicago Ave and 9th Ave, Algona	SA	X	X						LF
AGW240-5	S	Offsite CMT	Chicago Ave and 9th Ave, Algona	SA	X	X						LF
AGW241-1	S (WT)	Offsite CMT	Chicago Ave and 8th Ave, Algona	SA	X							LF
AGW241-5	S	Offsite CMT	Chicago Ave and 8th Ave, Algona	SA	X							LF
AGW242-1	S (WT)	Offsite CMT	10th Ave N and Algona Blvd, Algona	SA	X							LF
AGW242-2	S	Offsite CMT	10th Ave N and Algona Blvd, Algona	SA	X							LF
AGW242-5	I	Offsite CMT	10th Ave N and Algona Blvd, Algona	SA	X							LF
AGW243-1	S (WT)	Offsite CMT	Boundary Blvd and Algona Blvd, Algona	SA	X							LF
AGW243-3	S	Offsite CMT	Boundary Blvd and Algona Blvd, Algona	SA	X							LF
AGW243-5	I	Offsite CMT	Boundary Blvd and Algona Blvd, Algona	SA	X							LF

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW244	S (WT)	Offsite	Celery Ave and 9th Ave, Algona	SA	X	X						LF
AGW245	S (WT)	Offsite	11th Ave between Algona Blvd and Celery Ave, Algona	SA	X							PDB
AGW246	S (WT)	Offsite	Celery Ave between 11th Ave and 10th Ave, Algona	SA	X							PDB
AGW247-1	S (WT)	Offsite CMT	10th Ave E of Algona Blvd, Algona	Q	X	SA						LF
AGW247-5	S	Offsite CMT	10th Ave E of Algona Blvd, Algona	SA	X	X						LF
AGW248-1	S (WT)	Offsite CMT	Chicago Ave and 11th Ave, Algona	SA	X							LF
AGW248-5	S	Offsite CMT	Chicago Ave and 11th Ave, Algona	SA	X							LF
AGW249-1	S (WT)	Offsite CMT	Boundary Blvd, Algona	SA	X							LF
AGW249-5	S	Offsite CMT	Boundary Blvd, Algona	SA	X							LF
AGW250-1	S (WT)	Offsite CMT	Junction Blvd, Algona	SA	X							LF
AGW250-2	S	Offsite CMT	Junction Blvd, Algona	SA	X							LF
AGW250-3	I	Offsite CMT	Junction Blvd, Algona	SA	X							LF
AGW250-6	D	Offsite CMT	Junction Blvd, Algona	SA	X							LF
AGW251-1	S (WT)	Offsite CMT	Milwaukee Blvd, Algona	SA	X	X						LF
AGW251-2	S	Offsite CMT	Milwaukee Blvd, Algona	SA	X	X						LF
AGW251-3	I	Offsite CMT	Milwaukee Blvd, Algona	Q	X	SA						LF
AGW251-6	D	Offsite CMT	Milwaukee Blvd, Algona	SA	X							LF
AGW252	D	Offsite	N Access Rd, W Main St	SA	X							PDB
AGW253	I	Offsite	N Access Rd, W Main St	A	X							PDB
AGW254-1	S (WT)	Offsite CMT	S Access Rd, W Main St	SA	X							LF
AGW254-2	S	Offsite CMT	S Access Rd, W Main St	SA	X							LF
AGW254-5	I	Offsite CMT	S Access Rd, W Main St	SA	X							LF
AGW255-1	S (WT)	Offsite CMT	15th St SW, N of O St	SA	X							LF
AGW255-3	S	Offsite CMT	15th St SW, N of O St	SA	X							LF
AGW255-5	I	Offsite CMT	15th St SW, N of O St	SA	X							LF
AGW256	I	Offsite	Scrubber Alley outside of Bldg 17-07	SA	X							PDB

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW257	S	Offsite	GSA, S of NW Building	SA	X							PDB
AGW258	S	Offsite	GSA, N of NW Building	SA	X							PDB
AGW259	D	Offsite	S Access Rd, W Main St	SA	X							PDB
AGW260	D	Offsite	10th Ave N and Algona Blvd, Algona	SA	X							PDB
AGW261	S	Offsite	S end of Milwaukee Blvd, Algona	SA	X							PDB
AGW262	S (WT)	Offsite	11th Ave, Algona	SA	X							PDB
AGW263	S (WT)	Offsite	Chicago Ave and 10th Ave, Algona	SA	X							PDB
AGW264	D	Offsite	Chicago Ave and 9th Ave, Algona	SA	X							PDB
AGW265	I	Offsite	Chicago Ave and 9th Ave, Algona	SA	X							PDB
AGW266	S	Offsite	Lund Rd at Main St	SA	X							PDB
AGW267	I	Offsite	7th Ave and Celery Ave, Algona	SA	X							PDB
AGW268	D	Offsite	7th Ave and Celery Ave, Algona	SA	X							PDB
AGW269	S	Offsite-Algona Pilot Test	Primus, E of Warehouse	SA	X	X						LF
AGW270	S	Offsite-Algona Pilot Test	Primus, E of Warehouse	SA	X	X						LF
AGW271	S	Offsite-Algona Pilot Test	Primus, E of Warehouse	SA	X	X						LF
AGW272	S	Offsite-Algona Pilot Test	Primus, W of Warehouse	SA	X	X						LF
AGW273	S	Offsite-Algona Pilot Test	Primus, W of Warehouse	Q	X	SA						LF
AGW274	S	Offsite-Algona Pilot Test	Primus, W of Warehouse	SA	X	X						LF
AGW275	S	Offsite-Algona Pilot Test	Primus, W of Warehouse	SA	X	X						LF
AGW276-2	S	Offsite CMT	DCT Industrial	SA	X							LF
AGW276-5	I	Offsite CMT	DCT Industrial	SA	X							LF
AGW276-6	D	Offsite CMT	DCT Industrial	SA	X							LF
AGW277	S (WT)	Bldg 17-06-AOC A-13	In Bldg 17-06	Q					X			LF
AGW278-1	S (WT)	Bldg 17-07-On-site CMT	S Part of Bldg 17-07	Q	X			X				LF
AGW278-2	S	Bldg 17-07-On-site CMT	S Part of Bldg 17-07	Q	X							LF
AGW278-4	I	Bldg 17-07-On-site CMT	S Part of Bldg 17-07	Q	X							LF

TABLE E-1

Phase 8 Groundwater Monitoring Plan

Well	Groundwater Zone	Description	Location	Phase 8 Frequency	VOCs 8260 LL (a)	NA Parameters (b)	Metals 6020A (c)	Cyanide D7511 (d)	TPH-D NWTPH-Dx (e)	TPH-G NWTPH-Gx	BTEX 8260	Sampling Method (f)
AGW278-6	D	Bldg 17-07-On-site CMT	S Part of Bldg 17-07	Q	X							LF
AGW279	S (WT)	Bldg 17-06-AOC A-13	In Bldg 17-06	Q					X			LF
AGW280	S (WT)	Bldg 17-06-AOC A-13	In Bldg 17-06	Q					X			LF
AGW281	S (WT)	Bldg 17-06-AOC A-13	In Bldg 17-06	Q					X			LF
AGW282	S (WT)	Bldg 17-06-AOC A-13	In Bldg 17-06	Q					X			LF
IW34	S	Offsite-Algona Pilot Test	Primus, E of Warehouse	SA	X	X						LF
IW36	S	Offsite-Algona Pilot Test	Primus, E of Warehouse	Q	X	SA						LF
IW37	S	Offsite-Algona Pilot Test	Primus, E of Warehouse	Q	X	SA						LF
APP-057	S	WSDOT well-offsite	E of W Valley Hwy, S of W Main St	SA	X							LF

Notes:

(a) VOCs by Method 8260C LL; collect 3 40-mL VOAs (HCl); Method 8260 SIM may alternatively be used to meet screening levels, if needed. VOC analyte list will include: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, and VC.

(b) MNA Parameters include Ethene/Ethane/Methane by RSKSOP-175 modified, Sulfate By EPA Method 300.0, TOC by SM 5310 C-2000, and DO/ORP/Iron II field measurements.

(c) Dissolved metals, field filtered, preserved HNO3

(d) Cyanide analysis will be completed by Apex Labs. Samples will be field filtered. One unpreserved and one preserved sample will be collected. Sampling frequency will the same frequency as the Phase 8 frequency unless otherwise discussed with Washington State Department of Ecology.

(e) With silica gel cleanup.

(f) The bottom of each PDB is placed 2 feet from the bottom of the well screen except for PDBs at AGW227 and AGW237, which are placed 6 feet from the bottom of the well screen and all water table wells that are 2 ft from the top of the lowest recorded DTW.

MS/MSDs will collected at least 1 per 20 samples per analysis. A field duplicate will be collected at least 1 per 20 samples per analysis. One trip blank per cooler will be run for VOCs and TPH-G.

One laboratory blank per 20 samples will be analyzed for metals.

Abbreviations and Acronyms:

AOC = Area of Concern
As = arsenic
Cd = cadmium
CMT = continuous multi-channel
Cu = copper
DO = dissolved oxygen
DTW = depth to water
EPA = US Environmental Protection Agency
GSA = General Services Administration
HCl = hydrocloric acid
JA = Junior Achievement
mL = milliliter
MNA = monitored natural attenuation
MS = matrix spike
MSD - matrix spike duplicate
LF = low flow
NA = natural attentuation
Ni = nickel
HN03 = nitric acid
ORP = oxygen reduction potential
PDB = passive diffusion bag
SIM = select ion monitoring
SWMU = Solid Waste Management Unit
TOC = total organic carbon
TPH-Dx = total petroleum hydrocarbon diesel range
TPH-G = total petroleum hydrocarbon gas range
VOA = volatile organic analysis
VOC = volatile organic compound
WSDOT = Washington State Department of Transportation
WWPTP = Wastewater Pre-Treatment Plant
YMCA = Young Men's Christian Association

Groundwater Zone:

S(WT) = Water Table
S = Shallow
I = Intermediate
D = Deep

Frequency:

Q = Quarterly (March, June, September, December)
SA = Semiannually (June and December)
A = Annually (June)

Table E-2

Monitoring Well List

Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW001/R	CV	S	108321.75	1292187.09	6/16/1994 R - 4/9/2007	87.50	87.15	25	15 - 25	--
AGW002/R	CV	S	108658.18	1291592.08	6/20/1994 R - 9/28/2006	90.00	90.95	34	24 - 34	--
AGW006/R	CV	S	109011.93	1291314.95	6/22/1994 R - 3/19/2007	86.79	86.46	26	16 - 26	--
AGW009	CV	S	107910.10	1291228.50	8/22/1990	90.12	86.37	19	9 - 19	--
AGW010	CV	S	107985.00	1291211.00	8/23/1990	89.80	86.25	22	12 - 22	--
AGW011	CV	S	107990.00	1291230.00	8/23/1990	90.26	86.28	19	9 - 19	--
AGW012	CV	S	107974.00	1291263.00	8/23/1990	89.56	86.25	19	9 - 19	--
AGW013	CV	S	108059.00	1291135.00	7/31/1991	90.26	85.85	21	6 - 21	--
AGW014	CV	S	108021.00	1291228.00	7/31/1991	90.17	85.91	21	6 - 21	--
AGW015	CV	S	107992.00	1291138.00	8/2/1991	89.64	85.71	21	6 - 21	--
AGW016	CV	S	108016.00	1291170.00	8/2/1991	90.02	85.76	21	6 - 21	--
AGW017	CV	S	107944.00	1291142.00	8/5/1991	89.56	86.10	20	10 - 20	--
AGW018	CV	S	105603.40	1292146.20	9/24/1993	91.97	87.66	25	10 - 25	--
AGW020	CV	S	105159.40	1291843.90	12/29/1992	88.00	89.79	26	11 - 26	--
AGW021	CV	S	105210.10	1291604.50	12/30/1992	92.05	89.71	29	14 - 29	--
AGW022	CV	S	105211.90	1291707.60	12/31/1992	91.97	89.94	25	10 - 25	--
AGW023	CV	S	105292.80	1291639.10	12/30/1992	92.19	88.40	29	14 - 29	--
AGW024	CV	S	107595.00	1290180.00	10/15/1992	85.20	84.56	23	13 - 23	--
AGW025	CV	S	107672.00	1290316.00	10/15/1992	86.31	85.89	25	15 - 25	--
AGW026	CV	S	107264.00	1290325.00	10/14/1992	86.26	85.87	25	15 - 25	--
AGW027	CV	S	107852.00	1290559.00	11/9/1992	86.10	88.01	25	15 - 25	--
AGW028	CV	S	107171.00	1290566.00	11/10/1992	89.52	88.18	25	15 - 25	--
AGW029	CV	S	107753.00	1290133.00	11/9/1992	85.00	87.02	25	15 - 25	--
AGW030	CV	S	107520.00	1290021.00	11/11/1992	84.70	86.69	25	15 - 25	--
AGW031/R	CV	S	109488.60	1291125.28	9/8/1994 R - 3/20/2007	86.22	85.96	28	18 - 28	--
AGW032	CV	S	107955.00	1290313.00	9/8/1994	86.80	88.20	38	13 - 38	--
AGW033	CV	S	108907.00	1290680.00	12/15/1994	87.86	87.42	28	13 - 28	--
AGW034	CV	D	107676.20	1290195.10	1/18/1995	85.30	84.94	85	75 - 85	--
AGW035	CV	D	108916.00	1290684.00	1/19/1995	85.20	87.29	105	95 - 105	--
AGW037	CV	S	107298.00	1290655.00	1/8/1996	86.80	86.53	23	8 - 23	--
AGW038	CV	S	107033.00	1290770.00	4/29/1996	86.80	86.40	21	6 - 21	--
AGW039	CV	S	106981.00	1290780.00	4/29/1996	86.80	86.43	21	6 - 21	--
AGW040	CV	S	107032.00	1290762.00	4/30/1996	86.80	86.45	21	6 - 21	--
AGW041	CV	S	107247.00	1291983.00	5/30/1996	91.04	86.45	20	5 - 20	--

Table E-2

Monitoring Well List

Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW042	CV	S	107368.00	1291947.00	5/30/1996	89.95	85.90	20	5 - 20	--
AGW043	CV	S	107566.00	1291897.00	5/30/1996	90.68	86.44	20	5 - 20	--
AGW044	CV	S	107509.00	1291866.00	5/30/1996	90.08	86.52	20	5 - 20	--
AGW046	CV	S	107141.00	1290746.00	9/12/1996	90.43	85.93	20	5 - 20	--
AGW047	CV	S	107178.00	1290724.00	9/12/1996	90.84	86.19	20	5 - 20	--
AGW048	CV	S	107207.00	1290746.00	9/12/1996	90.60	86.27	20	5 - 20	--
AGW049	CV	S	107208.00	1290731.00	9/12/1996	90.49	86.39	20	5 - 20	--
AGW050	CV	S	107207.00	1290697.00	9/12/1996	90.74	86.20	20	5 - 20	--
AGW053/R	CV	S	108862.77	1291622.99	9/18/1996 R - 9/25/2006	91.42	90.98	27	22 - 27	--
AGW055/R	CV	I	109013.51	1291306.63	10/3/1996 R - 3/19/2007	86.67	86.31	45	35 - 45	--
AGW057/R	CV	I	108116.67	1291439.63	10/1/1996 R - 4/10/2007	90.04	89.64	50	40 - 50	--
AGW058/R	CV	S	108116.86	1291446.93	10/2/1996 R - 4/10/2007	90.24	89.92	25	15 - 25	--
AGW059/R	CV	S	108111.78	1291709.71	10/2/1996 R - 4/10/2007	89.58	89.23	25	15 - 25	--
AGW060/R	CV	I	108112.62	1291717.64	10/3/1996 R - 4/9/2007	89.42	89.11	50	40 - 50	--
AGW064	CV	S	110286.00	1291459.00	12/2/1996	88.72	88.39	27	12 - 27	--
AGW065	CV	S	109831.00	1291255.00	12/2/1996	86.38	86.03	27	12 -27	--
AGW066	CV	S	109473.00	1291356.00	12/2/1996	89.96	89.58	29	14 - 29	--
AGW067	CV	S	109480.00	1291739.00	12/3/1996	89.89	89.51	29	14 - 29	--
AGW068	CV	S	110964.00	1291940.00	12/3/1996	87.33	87.04	27	12 - 27	--
AGW069	CV	S	110135.00	1291850.00	12/3/1996	87.72	87.49	27	12 - 27	--
AGW072	CV	I	109463.00	1291345.00	3/20/2007	90.20	89.63	74	64 - 74	--
AGW073	CV	D	109463.00	1291345.00	3/20/2007	90.20	89.56	110	100 - 110	--
AGW074	CV	S	103722.00	1291780.00	12/14/1996	87.84	87.63	25	5 - 25	--
AGW076	CV	S	106849.48	1292181.10	3/24/1997	86.76	86.26	19	4 - 19	--
AGW077	CV	S	106851.69	1292228.48	3/24/1997	90.80	86.73	19	4 - 19	--
AGW078	CV	S	106795.10	1292258.90	3/24/1997	87.50	87.28	19	4 - 19	--
AGW079	CV	S	107508.00	1290261.00	5/15/1997	87.81	84.69	19	4 - 19	--
AGW080	CV	S	105172.00	1289720.00	6/12/1997	82.62	82.21	21	6 - 21	--
AGW081	CV	S	105885.00	1289723.00	6/12/1997	83.30	82.37	20	5 -20	--
AGW082	CV	S	106507.00	1289732.00	6/12/1997	84.22	83.83	21	6 - 21	--
AGW083	CV	S	107125.00	1289867.00	6/12/1997	86.86	86.44	21	6 - 21	--
AGW084	CV	S	107070.00	1292205.60	4/14/1999	90.95	86.20	20	10 - 20	--
AGW085	CV	S	107057.10	1292253.70	4/14/1999	86.95	86.42	20	10 - 20	--

Table E-2

Monitoring Well List

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			Northing (b)	Easting (b)						
AGW086	CV	S	107043.40	1292193.20	4/14/1999	87.01	86.74	20	10 - 20	--
AGW087	CV	I	102707.00	1292045.00	10/21/2001	86.32	85.79	50	40 - 50	--
AGW088	CV	S	102718.00	1292045.00	10/22/2001	86.27	85.85	25	15 - 25	--
AGW089	CV	I	103368.00	1292029.00	10/23/2001	87.29	86.80	50	40 - 50	--
AGW090	CV	S	103381.00	1292030.00	10/23/2001	87.29	86.50	25	15 - 25	--
AGW091	CV	I	103722.00	1291787.00	10/26/2001	87.79	87.32	50	40 - 50	--
AGW095/R	CV	I	109485.68	1291121.17	12/2/2003 R - 3/20/2007	85.94	85.53	55	45 - 55	--
AGW098/R	CV	D	109488.52	1291112.70	12/9/2003 R - 3/19/2007	86.06	85.64	90	80 - 90	--
AGW100	CV	S	104018.05	1290751.73	3/29/2004	85.72	85.40	30	10 - 30	--
AGW101	CV	I	104018.17	1290729.69	3/29/2004	85.80	85.50	55	45 - 55	--
AGW102	CV	D	104018.20	1290712.50	4/2/2004	85.89	85.47	88	78 - 88	--
AGW103	CV	S	105418.88	1292509.17	3/30/2004	89.79	89.38	30	20 - 30	--
AGW104	CV	S	106226.92	1292247.69	3/29/2004	89.30	88.98	30	20 - 30	--
AGW105/R	CV	I	107571.90	1290050.16	3/31/2004 R - 1/4/2018	85.07	84.77	54	44.3 - 54.3	--
AGW106/R	CV	S	108661.33	1291560.30	6/1/2004 R - 9/28/2006	91.41	90.97	34	34 - 24	--
AGW110/R	CV	S	108774.69	1291535.71	6/2/2004 R - 9/25/2006	91.45	91.06	34	24 - 34	--
AGW112/R	CV	S	108873.01	1291534.45	6/2/2004 R - 9/25/2006	91.45	90.96	35	25 - 35	--
AGW115	CV	S	107151.48	1291728.78	10/6/2004	86.88	86.53	24	9 - 24	--
AGW116	CV	S	106810.12	1291727.90	10/6/2004	86.95	86.69	24	9 - 24	--
AGW117	CV	S	106801.95	1291928.22	10/7/2004	86.81	86.49	24	9 - 24	--
AGW118	CV	S	106596.80	1291880.10	10/7/2004	87.06	86.78	24	9 - 24	--
AGW119	CV	I	103587.42	1293390.72	12/2/2004	91.90	94.26	54	44 - 54	--
AGW120	CV	S	103578.36	1293389.67	12/2/2004	91.80	94.24	30	20 - 30	--
AGW121	CV	S	102575.56	1293424.53	12/2/2004	88.50	91.27	30	20 - 30	--
AGW125	CV	S	109478.67	1291542.80	3/20/2007	89.10	88.85	30	20 - 30	--
AGW126	CV	I	109477.48	1291536.49	3/19/2007	89.19	88.88	44	34 - 44	--
AGW127	CV	S	106421.00	1291922.94	9/8/2008	86.86	86.54	24	9 - 24	--
AGW128	CV	S	107298.21	1291873.85	9/12/2008	86.89	86.64	24	8 - 24	--
AGW129	CV	S	106952.15	1291883.93	9/11/2008	86.92	86.66	24	8 - 24	--
AGW130	CV	S	107621.95	1291845.24	9/11/2008	86.87	86.64	24	8 - 24	35, 45
AGW131	CV	S	107849.01	1290734.47	9/12/2008	86.29	85.98	25	15 - 25	--
AGW132	CV	S	105588.96	1291722.30	9/10/2008	87.26	86.96	27	17 - 27	--
AGW133	CV	S	105532.11	1291806.93	9/9/2008	88.42	88.11	27	17 - 27	35, 45

Table E-2

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Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW134	CV	S	108499.79	1290472.95	9/10/2008	84.09	83.65	27	17 - 27	--
AGW135	CV	S	109267.74	1290851.56	9/10/2008	84.91	84.54	27	17 - 27	--
AGW136	CV	S	109957.69	1291582.62	9/9/2008	86.84	86.60	28	18 - 28	35, 45
AGW137	CV	I	109957.69	1291588.92	10/30/2008	86.89	86.44	44	34 - 44	55, 65
AGW138	CV	D	109958.25	1291595.58	2/12/2009	86.95	86.64	89	79 - 89	--
AGW139	CV	I	109965.20	1291848.89	2/9/2009	87.12	86.68	44	34 - 44	--
AGW140	CV	I	110001.71	1291294.00	2/11/2009	86.33	85.92	45	35 - 45	--
AGW141	CV	I	110417.03	1291633.10	2/11/2009	86.84	86.37	44	34 - 44	--
AGW142	CV	D	110418.73	1291626.19	2/10/2009	86.85	86.51	90	80 - 90	--
AGW143	CV	D	107952.59	1290023.17	10/6/2009	79.38	78.98	89	79 - 89	--
AGW144	CV	I	107961.75	1290027.12	10/8/2009	79.49	79.05	55	45 - 50	--
AGW145	CV	I	108340.70	1290210.19	10/12/2009	78.84	78.14	55	45 - 50	--
AGW146	CV	D	108349.03	1290213.74	10/7/2009	78.94	78.69	90	80 - 90	--
AGW147	CV	I	110130.50	1291059.28	10/13/2009	84.92	84.49	55	45 - 55	--
AGW148	CV	I	110453.19	1291216.44	10/12/2009	84.48	83.80	54	44 - 54	--
AGW149	CV	I	110843.51	1291374.34	10/14/2009	84.99	84.73	55	45 - 55	--
AGW150	CV	I	110931.82	1291616.21	10/5/2009	83.96	83.54	57	47 - 57	90
AGW151	CV	I	110247.59	1292016.55	10/14/2009	86.62	86.26	56	46 - 56	--
AGW152	CV	S	108077.71	1290689.57	9/30/2009	84.64	84.39	29	19 - 29	--
AGW153	CV	S	105579.30	1291513.87	10/2/2009	89.02	88.52	30	20 - 30	--
AGW154	CV	I	107098.00	1290560.00	2/23/2010	86.30	86.06	60	50 -60	--
AGW155	CV	I	107633.00	1290337.00	2/23/2010	86.39	86.12	50	40 - 50	--
AGW156	CV	I	107852.00	1290566.00	2/22/2010	89.01	88.45	60	50 - 60	--
AGW157	CV	I	108939.90	1290493.00	3/1/2010	81.55	81.20	54	44 - 54	30
AGW158	CV	I	109617.40	1290284.00	2/24/2010	82.55	82.15	50	40 - 50	30
AGW159	CV	D	109616.60	1290278.30	3/23/2010	82.64	82.03	90	80 - 90	--
AGW160	CV	I	110934.70	1291033.10	2/25/2010	85.04	84.60	60	50 - 60	30
AGW161	CV	I	111474.30	1291505.10	3/2/2010	82.06	81.68	57	47 - 57	30
AGW162	CV	I	110978.80	1292093.10	2/24/2010	85.88	85.31	60	50 - 60	30
AGW163	CV	I	107361.24	1291162.59	8/26/2010	86.63	86.40	57	47 - 57	28
AGW164	CV	I	107422.31	1290598.59	8/25/2010	86.73	86.52	60	50 - 60	29
AGW165	CV	S	107332.14	1290692.42	8/25/2010	86.72	86.50	28	18 - 28	55
AGW166	CV	I	109620.68	1289600.39	10/26/2010	78.00	77.61	60	50 - 60	30
AGW167	CV	D	109619.91	1289612.43	10/27/2010	78.34	78.11	95	85 - 95	--

Table E-2

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			Northing (b)	Easting (b)						
AGW168	CV	I	110289.46	1289780.50	10/28/2010	78.27	77.95	60	50 - 60	29
AGW169	CV	D	110289.65	1289797.14	10/29/2010	78.40	78.12	94	84 - 94	--
AGW170	CV	I	110281.93	1290219.02	11/1/2010	80.53	80.21	60	50 - 60	28.5
AGW171	CV	D	110281.40	1290255.90	11/2/2010	80.72	80.20	83	73 - 83	--
AGW172	CV	I	111557.34	1290848.40	9/2/2010	84.55	84.25	59	49 - 59	--
AGW173	CV	I	112192.07	1290877.21	9/1/2010	86.33	85.68	51	41 - 51	50
AGW174	CV	I	112216.81	1291526.68	8/23/2010	78.18	77.97	59	49 - 59	59
AGW175	CV	I	112939.21	1291540.49	8/27/2010	75.64	75.16	58	48 - 58	--
AGW176	CV	I	112850.90	1290581.44	9/3/2010	80.75	80.48	59	49 - 59	--
AGW177	CV	I	111009.55	1289719.25	9/21/2010	78.05	77.76	58	48 - 58	29
AGW178	CV	D	111009.51	1289729.66	9/22/2010	78.04	77.74	95	85 - 95	--
AGW179	CV	I	110997.70	1290314.18	9/23/2010	79.47	79.22	51	41 - 51	30
AGW180	CV	D	110997.42	1290320.61	9/23/2010	79.30	79.00	81	71 - 81	--
AGW181	CV	I	114342.40	1290301.20	4/25/2011	70.34	70.14	59	49 - 59	--
AGW182	CV	I	110464.10	1288855.90	4/29/2011	73.40	73.08	58	48 - 58	29
AGW183	CV	D	110470.50	1288856.30	5/2/2011	73.34	73.01	94	84 - 94	--
AGW184	CV	I	112891.50	1292585.00	4/26/2011	77.53	77.26	59	49 - 59	--
AGW185	CV	D	112221.10	1291527.00	4/27/2011	77.83	77.39	92	82 - 92	--
AGW186	CV	I	114609.70	1292503.00	4/28/2011	73.37	73.00	54	44 - 54	--
AGW187	CV	I	113825.70	1291571.30	5/3/2011	72.46	72.21	59	49 - 59	--
AGW188	CV	I	115384.18	1290322.33	5/4/2011	65.00	64.68	59	49 - 59	--
AGW189	CV	I	111711.80	1293024.80	5/5/2011	85.24	84.87	59	49 - 59	--
AGW190	CV	I	115310.70	1291605.00	5/6/2011	69.94	69.68	59	49 - 59	--
AGW191	CV	I	109513.70	1288847.90	8/29/2011	72.72	72.30	60	50 - 60	--
AGW192	CV	D	109520.80	1288848.40	8/30/2011	72.71	72.39	95	85 - 95	25
AGW193	CV	S	109619.80	1289619.50	8/31/2011	78.58	78.33	30	20 - 30	--
AGW194	CV	S	109617.00	1290288.10	9/1/2011	82.52	82.29	30	20 - 30	--
AGW195	CV	D	112478.17	1289154.96	10/3/2011	78.18	77.88	90	80 - 90	30
AGW196	CV	I	112469.70	1289153.89	10/4/2011	78.09	77.79	55	45 - 55	--
AGW197	CV	D	113219.38	1289798.10	10/5/2011	73.25	72.94	85	75 - 85	29
AGW198	CV	I	113211.65	1289802.68	10/5/2011	73.39	73.10	58	48 - 58	--
AGW199	CV	D	112866.83	1290589.29	10/6/2011	80.52	80.20	95	85 - 95	28

Table E-2

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Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW200-1 AGW200-2 AGW200-3 AGW200-4 AGW200-5 AGW200-6 AGW200-7	CMT	S, I, D	107787.09	1290349.87	10/18/2011	86.72	NS 86.27 86.26 NS NS 86.24 NS	99.2	19.25 - 19.75 29.25 - 29.75 39.25 - 39.75 49.25 - 49.75 59.25 - 59.75 79.25 - 79.75 98.3 - 98.7	--
AGW201-1 AGW201-2 AGW201-3 AGW201-4 AGW201-5 AGW201-6 AGW201-7	CMT	S, I, D	107804.13	1290577.53	10/20/2011	86.65	NS 86.36 NS NS 86.30 86.31 NS	97.1	19.25 - 19.75 29.25 - 29.75 39.25 - 39.75 49.25 - 49.75 59.25 - 59.75 79.25 - 79.75 96.3 - 96.7	--
AGW202-1 AGW202-2 AGW202-3 AGW202-4 AGW202-5 AGW202-6 AGW202-7	CMT	S, I, D	107806.38	1290809.29	10/24/2011	86.72	NS 86.26 NS 86.26 NS 86.29 NS	98.1	20.25 - 20.75 30.25 - 30.75 40.25 - 40.75 50.25 - 50.75 60.25 - 60.75 80.25 - 80.75 97.3 - 97.7	--
AGW203-1 AGW203-2 AGW203-3 AGW203-4 AGW203-5 AGW203-6	CMT	S, I, D	107796.15	1291238.36	10/26/2011	86.85	NS 86.53 NS 86.49 NS 86.51	101.1	19.25 - 19.75 29.25 - 29.75 39.25 - 39.75 48.25 - 48.75 59.25 - 59.75 79.25 - 79.75	--
AGW204	CV	I	105900.00	1292018.33	10/27/2011	87.71	87.34	58	48 - 58	30
AGW205	CV	I	106167.04	1291385.39	10/27/2011	86.33	86.02	58	48 - 58	30
AGW206	CV	I	106979.63	1291246.98	10/28/2011	86.53	86.22	58	48 - 58	29

Table E-2

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Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW207-1	CMT	S, I, D	111524.93	1289007.62	11/1/2011	76.87	76.22	80.6	19.5 - 20	--
AGW207-2							76.22		29.5 - 30	
AGW207-3							76.21		39.5 - 40	
AGW207-4							76.22		49.5 - 50	
AGW207-5							76.22		59.5 - 60	
AGW207-7							76.22		79.8 - 80.2	
AGW208-1	CMT	S, I, D	111417.86	1289593.51	11/2/2011	75.80	75.43	95.1	21.05 - 21.55	--
AGW208-2							75.41		29.05 - 29.55	
AGW208-3							75.43		39.05 - 39.55	
AGW208-4							75.42		49.05 - 49.55	
AGW208-5							75.43		67.05 - 67.55	
AGW208-6							75.42		79.05 - 79.55	
AGW208-7							75.43		94.3 - 94.7	
AGW209-1	CMT	S, I, D	111423.10	1289965.11	11/3/2011	78.73	NS	93.2	19.25 - 19.75	--
AGW209-2							78.48		29.25 - 29.75	
AGW209-3							NS		39.25 - 39.75	
AGW209-4							NS		49.25 - 49.75	
AGW209-5							78.48		59.25 - 59.75	
AGW209-6							78.48		79.25 - 79.75	
AGW209-7							NS		92.4 - 92.8	
AGW210-1	CMT	S, I, D	111402.14	1290493.07	11/7/2011	80.63	NS	92.4	21.25 - 21.75	--
AGW210-2							80.21		29.75 - 30.25	
AGW210-3							NS		37.75 - 38.25	
AGW210-4							NS		49.75 - 50.25	
AGW210-5							80.22		59.75 - 60.25	
AGW210-6							80.21		79.75 - 80.25	
AGW210-7							NS		91.75 - 92.25	
AGW211-1	CMT	S, I, D	111375.49	1290939.95	11/9/2011	82.58	NS	90	19.5 - 20	--
AGW211-2							80.06		29.5 - 30	
AGW211-3							NS		37.5 - 38	
AGW211-4							NS		49.5 - 50	
AGW211-5							80.06		59.5 - 60	
AGW211-6							80.05		79.5 - 80	
AGW211-7							NS		89.6 - 89.9	

Table E-2

Monitoring Well List

Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW212-1 AGW212-2 AGW212-3 AGW212-5 AGW212-6 AGW212-7	CMT	S, I, D	111161.74	1291458.78	11/11/2011	83.32	NS 82.94 NS 82.94 NS 82.91	100.1	20.5 - 21 29.5 - 30 39.5 - 40 59.5 - 60 80.5 - 81 99.5 - 99.8	--
AGW213	CV	D	114349.33	1290301.26	11/15/2011	70.27	69.98	90	80 - 90	28
AGW214	CV	I	115878.57	1291218.94	11/15/2011	64.32	64.01	52	42 - 52	27
AGW215	CV	I	115623.02	1289515.56	11/16/2011	63.44	63.05	58	48 - 58	29
AGW216	CV	I	116054.67	1291810.63	11/17/2011	65.94	65.65	60	50 - 60	30
AGW217	CV	I	116843.73	1291243.70	11/18/2011	62.68	62.19	57	47 - 57	29
AGW218	CV	I	116061.35	1290594.27	11/21/2011	63.73	63.33	59	49 - 59	28
AGW219	CV	I	118029.63	1291230.44	11/22/2011	62.07	61.73	52	42 - 52	30
AGW220	CV	I	116762.10	1290633.22	11/28/2011	61.54	61.08	60	50 - 60	28
AGW221	CV	I	117317.90	1291826.95	11/29/2011	63.23	62.83	59	49 - 59	--
AGW222	CV	I	107331.30	1291536.80	12/2/2012	86.85	86.39	59	49 - 59	27
AGW223	CV	D	107086.50	1290710.50	12/4/2012	86.55	86.15	91	81 - 91	30, 60, 90
AGW224	CV	S	110475.90	1288858.20	12/5/2012	73.25	72.70	17	2 - 17	--
AGW225	CV	S	109507.70	1288848.10	12/5/2012	72.71	71.90	17	2 - 17	--
AGW226	CV	S	109916.30	1288473.20	12/5/2012	70.37	69.75	17	2 - 17	--
AGW227	CV	I	110364.70	1288137.00	12/6/2012	72.00	71.52	50	40 -50	--
AGW228	CV	S	110364.60	1288129.30	12/6/2012	72.10	71.79	28	18 - 28	--
AGW229	CV	S	110281.70	1290211.50	12/7/2012	80.45	79.94	17	2 - 17	--
AGW230	CV	D	112891.90	1292589.80	12/10/2012	77.75	77.45	84	74 - 84	--
AGW231	CV	S	113205.17	1289807.50	5/19/2013	73.50	73.10	30	20 - 30	9
AGW232	CV	S	112487.98	1289159.75	5/20/2013	78.26	77.96	30	20 - 30	14
AGW233	CV	D	113849.10	1291566.90	5/21/2013	72.09	71.56	83	73 - 83	30
AGW234	CV	D	112863.67	1288839.98	5/22/2013	70.37	69.78	84	74 - 84	21, 57
AGW235-1 AGW235-2 AGW235-3 AGW235-4 AGW235-5 AGW235-6 AGW235-7	CMT	S, I, D	111970.80	1288070.60	5/24/2013	70.23	69.94 69.94 69.94 69.95 69.95 69.95 69.95	73	8.5 - 9 18.5 - 19 28.5 - 29 38.5 - 39 48.5 - 49 58.5 - 59 70.9 - 71.1	--
AGW236	CV	S	111665.90	1288460.40	5/28/2013	75.23	74.85	30	20 - 30	14
AGW237	CV	D	114236.60	1289103.20	9/23/2013	70.82	70.49	80	70 - 80	--
AGW238	CV	I	114232.10	1289095.30	9/24/2013	71.00	70.26	61	51 - 61	--
AGW239	CV	S	114227.10	1289089.00	9/25/2013	71.16	70.78	30	20 - 30	8.5

Table E-2

Monitoring Well List

Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW240-1	CMT	WT, S	109028.68	1288847.28	6/10/2014	72.77	72.49	30	5 - 7.5	--
AGW240-3							72.48		17.5 - 18	
AGW240-5							72.50		28 - 28.5	
AGW241-1	CMT	WT, S	108594.71	1288810.81	6/11/2014	73.49	73.28	30	4 - 6.5	--
AGW241-3							73.28		16.5 - 17	
AGW241-5							73.27		27 - 27.5	
AGW242-1	CMT	WT, S, I	109460.66	1287860.95	6/13/2014	70.09	69.84	82.3	3.5 - 6	--
AGW242-2							69.84		16 - 16.5	
AGW242-3							69.84		26.5 - 27	
AGW242-4							69.84		40 - 40.5	
AGW242-5							69.84		50 - 50.5	
AGW242-6							69.84		60 - 60.5	
AGW243-1	CMT	WT, S, I	110324.30	1287595.81	6/17/2014	70.67	70.44	51.4	4 - 6.5	--
AGW243-3							70.43		25 - 25.5	
AGW243-5							70.43		50 - 50.5	
AGW244	CV	WT	109028.79	1288287.97	6/16/2014	72.36	72.04	7.5	2.5 - 7.5	--
AGW245	CV	WT	109949.16	1288223.19	6/16/2014	70.46	70.21	7.5	2.5 - 7.5	--
AGW246	CV	WT	109764.37	1288220.41	6/16/2014	70.90	70.41	7.5	2.5 - 7.5	--
AGW247-1	CMT	WT, S	109472.84	1288356.70	6/18/2014	71.82	71.55	30	3.5 - 6	--
AGW247-3							71.54		16 - 16.5	
AGW247-5							71.54		26.5 - 27	
AGW248-1	CMT	WT, S	109911.46	1288865.73	6/19/2014	72.02	71.83	30	3 - 5.5	--
AGW248-3							71.83		15.5 - 16	
AGW248-5							71.82		26 - 26.5	
AGW249-1	CMT	WT, S	110307.76	1288674.84	6/20/2014	73.72	73.41	30	6 - 8.5	--
AGW249-3							73.40		18.5 - 19	
AGW249-5							73.39		29 - 29.5	
AGW250-1	CMT	WT, S, I, D	106226.47	1289452.96	6/24/2014	78.79	78.45	90	6.5 - 9	--
AGW250-2							78.44		26 - 26.5	
AGW250-3							78.44		41 - 41.5	
AGW250-4							78.45		51 - 51.5	
AGW250-5							78.45		61 - 61.5	
AGW250-6							78.46		81 - 81.5	
AGW250-7							78.45		89.5 - 89.7	
AGW251-1	CMT	WT, S, I, D	108708.65	1289286.73	6/27/2015	76.46	76.09	87	6 - 8.5	--
AGW251-2							76.08		25 - 25.5	
AGW251-3							76.07		40 - 40.5	
AGW251-4							76.07		52 - 52.5	
AGW251-5							76.08		62.5 - 63	
AGW251-6							76.08		76 - 76.5	
AGW251-7							76.07		86.55 - 86.75	
AGW252	CV	D	115756.04	1288459.70	11/10/2014	65.91	68.19	67	57 - 67	--
AGW253	CV	I	115757.54	1288469.14	11/11/2014	65.90	68.02	48	38 - 48	--
AGW254-1	CMT	WT, S, I	115618.56	1288892.41	11/13/2014	66.46	70.47	78.8	4.9 - 7.4	--
AGW254-2							70.47		21 - 21.5	
AGW254-3							70.47		31 - 31.5	
AGW254-4							70.46		41 - 41.5	
AGW254-5							70.46		50.5 - 51	
AGW254-6							70.46		61 - 61.5	
AGW255-1	CMT	WT, S, I	111034.17	1287862.58	11/14/2014	72.40	74.81	55	10.75 - 13.25	--
AGW255-3							74.78		29.5 - 30	
AGW255-5							74.78		54.7 - 55.2	

Table E-2

Monitoring Well List

Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW256	CV	I	109107.14	1292393.84	11/17/2014	88.36	88.08	59	49 - 59	--
AGW257	CV	S	109106.24	1292379.55	11/17/2014	88.27	87.86	29	19 - 29	--
AGW258	CV	S	110102.77	1292375.91	11/18/2014	90.37	90.25	29	19 - 29	--
AGW259	CV	D	115611.86	1288899.35	2/23/2015	66.45	65.99	74	69 - 74	--
AGW260	CV	D	109460.24	1287868.22	3/23/2015	70.07	69.47	83	78 - 83	--
AGW261	CV	S	108233.03	1289275.13	3/24/2015	76.49	76.04	29	19 - 29	--
AGW262	CV	WT	109917.66	1288486.00	3/24/2015	70.42	69.93	7.5	2.5 - 7.5	--
AGW263	CV	WT	109527.86	1288849.20	3/24/2015	72.49	72.10	7.5	2.5 - 7.5	--
AGW264	CV	D	109047.31	1288848.27	3/25/2015	72.44	71.89	78	68 - 78	--
AGW265	CV	I	109041.09	1288848.18	3/26/2015	72.51	71.97	59	49 - 59	--
AGW266	CV	S	115377.92	1290323.07	3/26/2015	65.07	64.69	29	19 - 29	--
AGW267	CV	I	108132.57	1288020.54	3/27/2015	72.67	72.17	59	49 - 59	--
AGW268	CV	D	108133.02	1288015.08	3/30/2015	72.77	72.22	71	66 - 71	--
AGW269	CV	S	108871.45	1289183.72	7/30/2015	77.89	77.54	30	20 - 30	--
AGW270	CV	S	108920.12	1289170.15	7/30/2015	77.62	77.18	30	20 - 30	--
AGW271	CV	S	108964.83	1289150.29	7/31/2015	76.97	76.59	30	20 - 30	--
AGW272	CV	S	109372.16	1288898.14	8/3/2015	76.75	76.32	30	20 - 30	--
AGW273	CV	S	109266.78	1288894.51	8/3/2015	76.33	76.10	30	20 - 30	--
AGW274	CV	S	109165.61	1288892.85	8/3/2015	76.56	76.32	30	20 - 30	--
AGW275	CV	S	108915.00	1288887.18	8/4/2015	76.85	76.49	30	20 - 30	--
AGW276-1 AGW276-2 AGW276-3 AGW276-4 AGW276-5 AGW276-6 AGW276-7	CMT	WT, S, I, D	108770.95	1289999.54	10/7/2015	79.11	78.74 78.74 78.74 78.73 78.73 78.74 78.74	100	10 - 15 25 - 25.5 35 - 35.5 47.5 - 48 60 - 60.5 80 - 80.5 100 - 100.2	--
AGW277	CV	S (WT)	107308.99	1291850.46	8/13/2017	86.90	86.58	24	9 - 24	20
AGW278-1	CMT	S (WT)	107301.03	1290693.89	8/18/2017	86.74	86.42	109	14.5 - 17	--
AGW278-2	CMT	S	107301.03	1290693.89	8/18/2017	86.74	86.42	109	24 - 25	--
AGW278-3	CMT	I	107301.03	1290693.89	8/18/2017	86.74	86.41	109	35.5 - 36.5	--
AGW278-4	CMT	I	107301.03	1290693.89	8/18/2017	86.74	86.41	109	44.5 - 45.5	--
AGW278-5	CMT	I	107301.03	1290693.89	8/18/2017	86.74	86.41	109	59 - 60	--
AGW278-6	CMT	D	107301.03	1290693.89	8/18/2017	86.74	86.42	109	79 - 80	--
AGW278-7	CMT	D	107301.03	1290693.89	8/18/2017	86.74	86.41	109	107.3 - 107.5	--
AGW279	CV	S (WT)	107302.27	1291811.22	12/27/2017	86.90	86.55	25	9 -24	--
AGW280	CV	S (WT)	107354.72	1291808.62	12/28/2017	86.90	86.13	25	9 -24	--

Table E-2

Monitoring Well List

Monitoring Well (a)	Well Type	Groundwater Zone	WCS North Zone 83(91)		Date Installed	Ground Elevation (ft) (c)	Top of Casing Elevation (ft) (c)	Depth of Well (ft bgs) (d)	Screened Interval (ft bgs)	Borehole Grab Sample (ft bgs)
			Northing (b)	Easting (b)						
AGW281	CV	S (WT)	107396.64	1291870.08	12/29/2017	86.90	86.49	30	9 - 24	--
AGW282	CV	S (WT)	107399.60	1291826.34	12/29/2017	86.90	86.55	25	8.5 - 23.5	--
APP-057	CV	S	114881.35	1288170.90	4/11/2007	66.41	68.57	29	19 - 29	--
APP-058	CV	S	114461.45	1287736.18	4/11/2007	66.25	68.34	28	18 - 28	--
APP-069	CV	S	115759.82	1288478.37	5/1/2007	65.88	68.09	20	10 - 20	--
IW33	INJ	S	108930.68	1289205.46	7/28/2015	78.10	77.793	40	20 - 40	--
IW34	INJ	S	108885.22	1289204.54	7/28/2015	78.17	77.825	40	20 - 40	--
IW35	INJ	S	108844.07	1289203.82	7/29/2015	78.09	77.772	40	20 - 40	--
IW36	INJ	S	108781.14	1289202.54	7/29/2015	78.17	77.954	40	20 - 40	--
IW37	INJ	S	108957.44	1289205.97	7/27/2015	78.14	77.929	40	20 - 40	--

Notes:

(a) Data for replacement (designated with R) wells reflect the most recent survey and well screen data.

(b) Horizontal Datum: WCS North Zone 83(91) US ft (+/- 0.05 ft).

(c) Vertical Datum: National Geodetic Vertical Datum of 1929, US ft (+/-0.01 ft), mean sea level.

(d) Depth of well defined as bottom of screened interval.

Boeing monitoring wells have designations beginning with AGW. Injection well have designations beginning with IW. Wells beginning with APP are owned by WSDOT.

Abbreviations/Acronyms:

-- = not applicable
bgs = below ground surface
CMT = continuous multi-channel tubing
CV = conventional
D = deep zone
ft = feet
I = intermediate zone
INJ = injection
NS = not surveyed
R = Replacement Well
S = shallow zone
WSDOT = Washington State Department of Transportation
WT = water table

Table E-3

Summary of Areas of Concern carried forward to the Feasibility Study

AOC	Building	Description	Primary Constituents of Concern	SWMU/AOC to be addressed in Feasibility Study?	Comments
A-01	17-06	Former USTs (TAU-01 and TAU-02)	TPH, BTEX	Yes	Petroleum hydrocarbon related constituents (DRO, GRO, BTEX) are above screening levels. Concentrations of VOCs at this area will be addressed as part of the Site-wide VOC impacts.
A-09	17-07	Acid Scrubber Drain Line Leak; Machine Fabrication	Metals, Cyanide	Yes	Metals contamination was left in place in soil above screening levels and has resulted in metals contaminated groundwater.
A-13	17-06	Petroleum contamination in soils and groundwater	TPH	Yes	Soil and groundwater exceddences of screening levels for petroleum hydrocarbons (DRO and ORO).
A-14	Site-wide	Site-wide TCE and VC concentrations in groundwater	TCE, VC	Yes	Groundwater exceedences of screening levels for TCE and VC.
A-15	Site-wide	Site-wide TCE and VC concentrations in surface water	TCE, VC	Yes	Detections of TCE and VC in surface water.

Notes:

TPH stands for petroleum hydrocarbons (can include DRO, ORO, or GRO).

MEK is the same as 2-Butanone.

Abbreviations/Acronyms:

AOC = area of concern

BTEX = benzene, toluene, ethylbenzene, and xylenes

DRO = diesel-range organics

GRO = gasoline-range organics

IRA = interim remedial action

MEK = methyl ethyl ketone

NFA = No Further Action

ORO = oil-range organics

RI = remedial investigation

SWMU = solid waste management unit

TCA = trichloroethane

TCE = trichloroethene

TPH = total petroleum hydrocarbons

UST = underground storage tank

VC = vinyl chloride

VOC = volatile organic compounds

SECTION F: PROCEDURES TO PREVENT HAZARDS

40 CFR 264.14; 270.14(b)(4)

SECTIONS

FIGURE

Introduction

The Boeing Auburn Facility is designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned, sudden, or non-sudden release of dangerous waste or dangerous waste constituents to air, soil, surface water, or groundwater that could threaten human health or the environment. This section describes the procedures used by Boeing to prevent such hazards.

F-1 SECURITY

40 CFR 264.14, 270.14(b)(4)

F-1a Security Procedures and Equipment

40 CFR 264.14; 270.14(b)(4)

Access to the Boeing Auburn Facility is controlled 24 hours a day, 7 days a week. The property is secured by a chain link fence surrounding the entire Facility. The top of the fence is lined with three strands of barbed wire. The Boeing Auburn Facility may be entered using one of five vehicular or several pedestrian gates. The railroad may enter the Facility using the normally locked railroad gate. The Facility maintains a 24 hours per day, 365 days per year armed security force. The security guards routinely patrol the perimeter of the Facility. The guards also control access at the vehicle and pedestrian gates.

Access to the Facility is strictly controlled by the security guards at the access gates. Only badged employees or contractors are permitted to enter the Facility. All visitors are issued temporary badges by security personnel and are escorted by authorized employees at all times. The pedestrian-only gates are available for use by electronic-badged employees. These turnstile gates open only with the use of the employee badge activating an electronic sensor.

The layout of the security system is shown in Figure F-1[3] and discussed in detail below.

F-1a(1) Facility Entry Control Systems

Ecology requires that facilities permitted to store or treat dangerous wastes must have an effective means to control entry or a 24-hour surveillance system monitoring access points to dangerous waste.

F-1a(1)(a) 24-Hour Surveillance System

The property is secured by a fence topped with three strands of barbed wires, with restricted access controlled by Boeing security guards 24 hours per day, 7 days per week.

F-1a(1)(b) Barrier and Means to Control Entry

Barrier

The Boeing Auburn Facility is secured by a fence topped with three strands of barbed wire that surrounds the entire Facility. Gated entrances to the Facility are guarded and controlled by Boeing security.

Access to the Boeing Auburn Facility

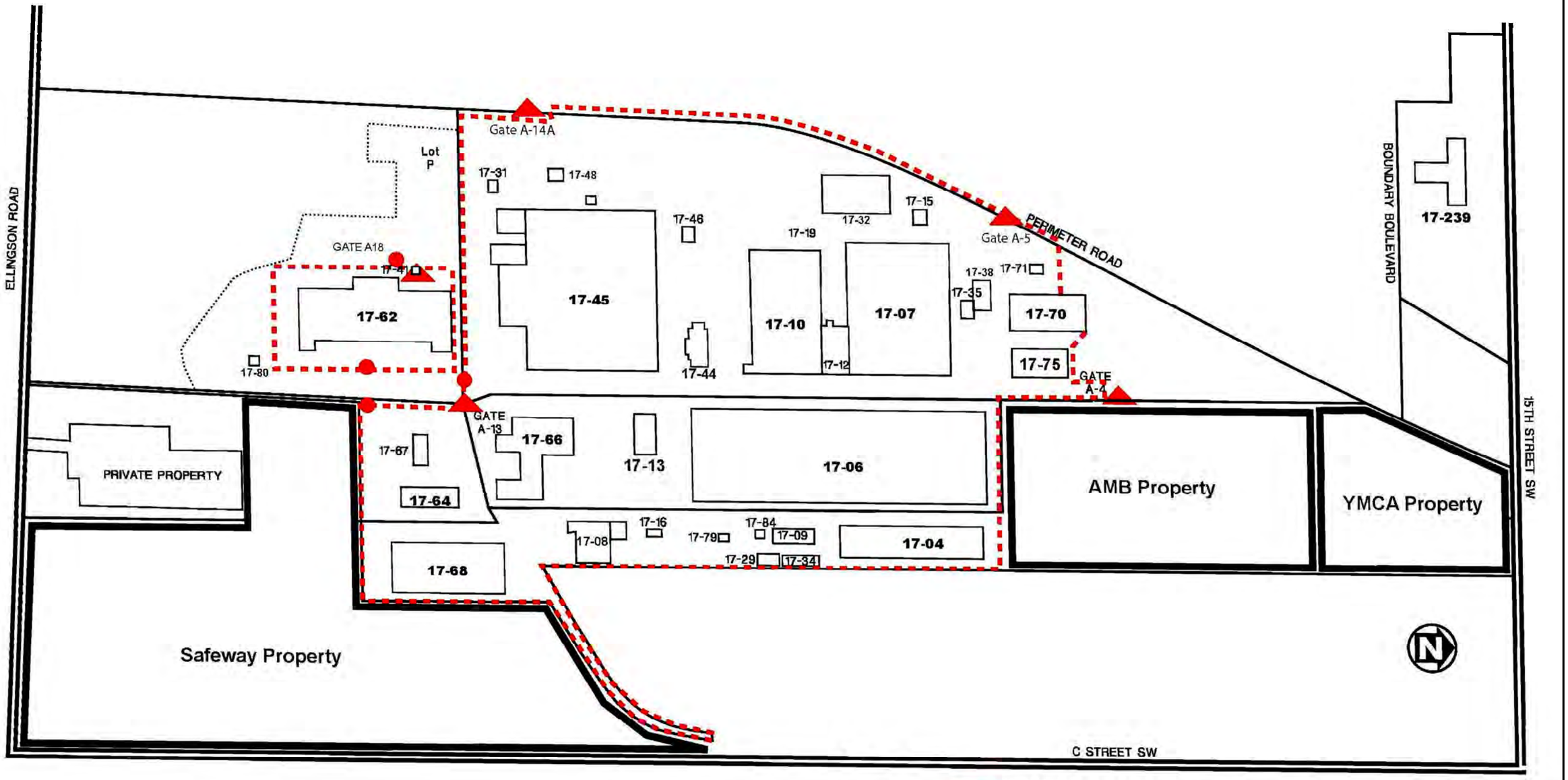
Access gates for the Boeing Auburn Facility are shown on Figure F-1 and described below.

North Vehicular Gate Entrances The primary entrance for employees and visitors on the north side of the Facility is accessed from Perimeter Road. This gate (Gate A5) is open 24 hours a day, 365 days a year. It is controlled by unarmed security guards. Gate A4 is a vehicle inspection station required for all deliveries to be inspected prior to entry. Gate A4 is open during normal operating hours.

South Vehicular Gate Entrances Employee entrances are located on the south side of the Facility. One entrance is off 1st Avenue; this gate (Gate A14) is a shift gate and is open for a limited time during weekdays and is not open on weekends. The other gate (Gate A13) is off on Pacific Avenue and 1st Avenue; this gate is open 24 hours a day, 365 days a year. Gate A13 is controlled by an unarmed security guard and Gate A14 is controlled by an armed security guard. A third gate (Gate A18) on the south side of the Facility allows access to Building 17-62; this gate is accessed by employee badge from First Avenue North or is only open for a limited time during weekdays and is not open on weekends. It is controlled by armed security guards.

Pedestrian Only Gates The rest of the accessible gates are pedestrian-only gates that are available for use by electronic-badged employees. These turnstile gates open only with the use of an employee badge activating an electronic sensor.

[3] Figures and tables are included at the end of this section.



N

0 600 1,200

Scale in Feet

LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**Security Map**	Figure F-1

G:\Projects\025\164\150\501\RCRA Permit Section B\FF-01SecurityMap.mxd 3/16/2018

SECTION G: CONTINGENCY PLAN

40 CFR 270.14(b)(7); 264.50 though 264.56

APPENDIX

G-1 Comprehensive Contingency Plan

A comprehensive contingency plan (CCP) was developed for The Boeing Auburn Facility because it is a large quantity generator. The complete CCP is included as Appendix G-1 of this application. The CCP outlines the process that should be followed to respond to environmental emergencies. It also describes the initial report requirements associated with those events. The plan is typically updated on an annual basis.

SECTION H: PERSONNEL TRAINING

40 CFR 270.14(b)(12); 264.16

Section H discusses personnel training associated with the regulated dangerous waste units. All regulated units at the Boeing Auburn Facility have been closed and there are no active regulated units. Section H is not required.

SECTION I: CLOSURE PLAN AND FINANCIAL INSURANCE

40 CFR 270.14(b)(13), (16), and (18); 264.144; 264.145; 264.149; and .151

SECTIONS

APPENDIX

Introduction

This section describes the status of closure activities at the Boeing Auburn Facility and financial assurance mechanisms associated with closure activities. Closure means both the closure of regulated units and closure of the Facility. The Boeing Auburn Facility currently has no regulated units requiring closure plan; all previous regulated units have undergone clean closure (see Section B). The following sections describe the closure process, closure cost estimate, financial assurance, and post closure planning process.

I-1 FACILITY CLOSURE PLAN

40 CFR 270.14(b)(13)

The Boeing Auburn Facility is currently undergoing corrective action related to releases from several SWMUs and AOCs. Corrective action is being conducted in accordance with requirements of the AO and the Washington State Model Toxics Control Act (MTCA; WAC 173-340). An RI has been conducted to determine the extent of contamination in soil, groundwater, air, and surface water (LAI 2017b). The Boeing Auburn Facility is currently in the feasibility phase of the corrective action process. The FS will determine appropriate cleanup actions to address remaining contamination. Selected remedies will be incorporated into a cleanup action plan for remediation of contaminated media and post-closure care. The FS is expected to be completed in 2019 and the cleanup action plan is expected to be completed in 2020.

I-2 CLOSURE COST ESTIMATE AND FINANCIAL ASSURANCE

40 CFR 270.14(b)(16); 264.144; 264.145; 264.151

Financial assurance is required only at certain stages of a Facility's lifespan during the operation of regulated units and for post closure activities (cleanup activities). For the Boeing Auburn Facility, financial assurance is not required for previous regulated units. A final cleanup action plan has not yet been established and therefore, a financial assurance mechanism is not required for Facility closure at

this time. Once the cleanup action plan is completed, Boeing will submit a closure cost estimate to Ecology and implement a financial assurance mechanism for Facility closure and post closure care.

Although, a cleanup action plan has not yet been developed, the site has undergone an interim action to clean up a former SWMU on the Prologis property and an interim groundwater monitoring program has been established to monitor the results of the interim action. Boeing has established a financial assurance mechanism (Letter of Credit) for groundwater monitoring associated with the interim action. The Letter of Credit is provided in Appendix I-1.

SECTION J: RELEASES FROM SOLID WASTE MANAGEMENT UNITS

SECTIONS

TABLES

FIGURE

J-1 SOLID WASTE MANAGEMENT UNITS OF KNOWN AND SUSPECTED RELEASES OF DANGEROUS WASTES OR CONSTITUENTS

40 CFR 270.14(d); 264.101

A RCRA Facility Assessment (RFA) of the Boeing Auburn Facility was conducted in 1997 (Tetra Tech 1998). The RFA was conducted at the request of EPA and Ecology. The RFA team, composed of representatives from EPA Region 10, Ecology, and Tetra Tech, Inc. (EPA contractor), conducted a visual site inspection (VSI) of the Boeing Auburn Facility on September 24 and 25, 1997. The purpose of the VSI was to inspect SWMUs and AOCs at the Boeing Auburn Facility. As part of the RFA, Boeing provided the RFA team with information about the location, history, and characteristics of known SWMUs and AOCs at the Facility.

Boeing Auburn Facility is currently undergoing RCRA corrective action for releases from several SWMUs and AOCs. In the state of Washington, EPA had delegated responsibility for implementation of the RCRA hazardous waste program to Ecology. The implementing regulations for RCRA Corrective Action in Washington are contained in the MTCA, WAC 173-340. The corrective action process includes conducting an RI and FS, preparing a cleanup action plan, and implementing the cleanup action. Site-specific Corrective Action requirements for the Boeing Auburn Facility are set forth in the AO (Ecology 2006). The AO identified SWMUs and AOCs requiring investigation as part of corrective action, which are further discussed in the following section. The list of SWMUs and AOCs identified in the AO is presented in Table J-1.

J-1a Solid Waste Management Units

SWMUs and AOCs are classified in Attachment 2 of the AO and are subdivided into three main categories, identified as columns, based on the extent of additional field investigations required for characterization. Column IA SWMUs and AOCs, required both soil and groundwater investigations. Column IB SWMUs and AOCs required only investigation of groundwater. For Column II SWMUs and AOCs, no additional investigation was required. Investigation activities were completed between 2003 and 2017 and summarized in the RI report (LAI 2017b). A number of SWMU and AOC descriptions were clarified in the report based on additional investigation activities and review of historical documents. In addition, based on RI investigations, three AOCs (AOC A-13 through AOC A-15) were added. SWMUs and AOCs are summarized in Table J-2. All Facility SWMUs and AOCs are shown on Figure J-1.

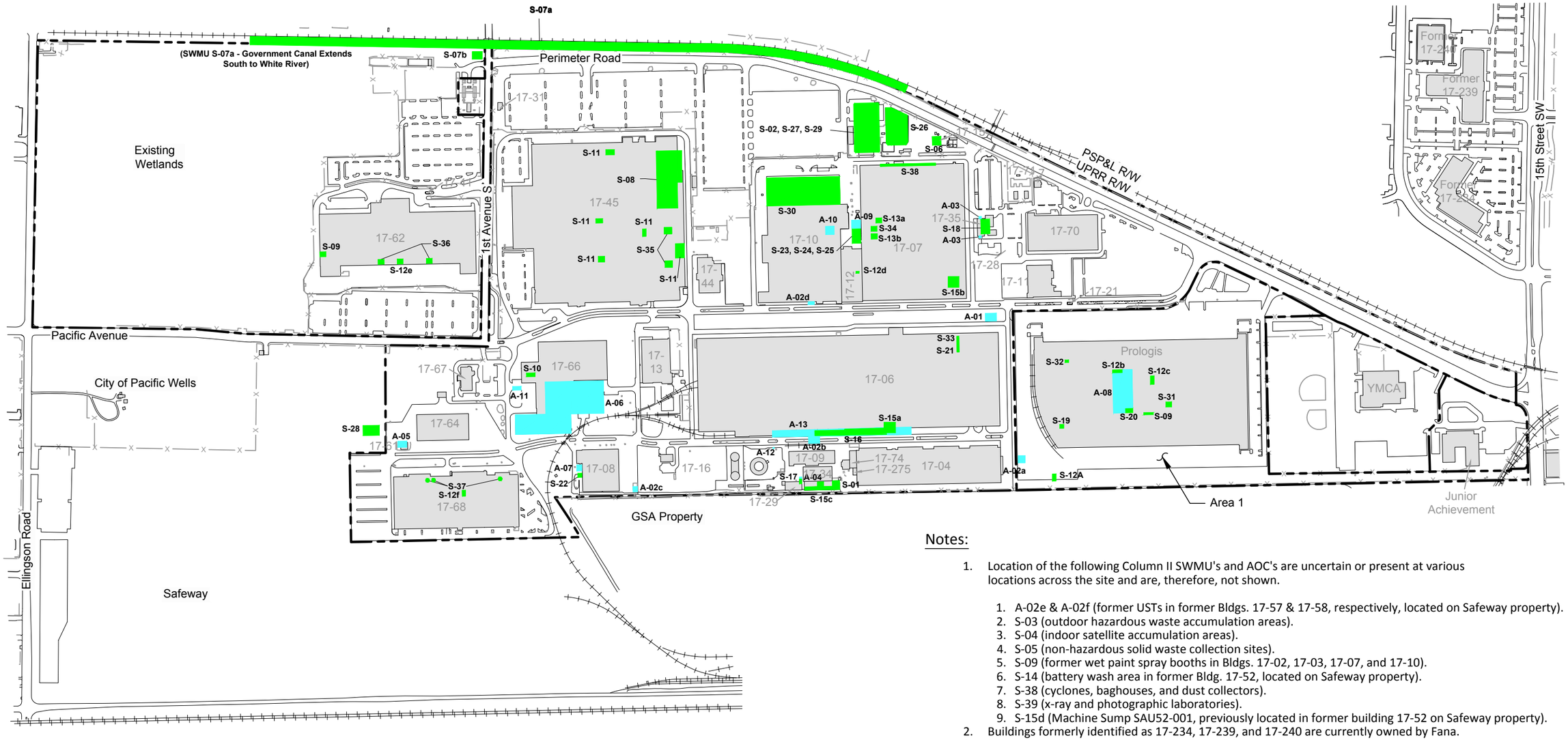
J-1b Releases

Information on characterization of releases from SWMUs and AOCs is documented in the RI report (LAI 2017b). The RI report also identifies SWMUs and AOCs requiring FS assessment and cleanup. Of the SWMUs and AOCs identified for investigation in the AO, five AOCs were moved forward to the FS. A summary of the identified releases from Column IA and IB SWMUs and AOCs are presented in Table J-3.

Information about the potential for the public to be exposed to releases from the Facility SWMUs and AOCs is presented in the RI report (LAI 2017b). This information includes potential pathways of human exposure and evaluates concentrations compared to screening levels.

J-2 CORRECTIVE ACTIONS IMPLEMENTED

Corrective action cleanup activities conducted at SWMUs and AOCs where releases have occurred at the Boeing Auburn Facility are summarized in Table J-4. Reports documenting these corrective actions were previously submitted to the EPA and/or Ecology. Please refer to the reports specified in Table J-4 for further information. Note that Table J-4 lists only those areas where cleanup was implemented or a no further action determination was made.



Notes:

1. Location of the following Column II SWMU's and AOC's are uncertain or present at various locations across the site and are, therefore, not shown.
    1. A-02e & A-02f (former USTs in former Bldgs. 17-57 & 17-58, respectively, located on Safeway property).
    2. S-03 (outdoor hazardous waste accumulation areas).
    3. S-04 (indoor satellite accumulation areas).
    4. S-05 (non-hazardous solid waste collection sites).
    5. S-09 (former wet paint spray booths in Bldgs. 17-02, 17-03, 17-07, and 17-10).
    6. S-14 (battery wash area in former Bldg. 17-52, located on Safeway property).
    7. S-38 (cyclones, baghouses, and dust collectors).
    8. S-39 (x-ray and photographic laboratories).
    9. S-15d (Machine Sump SAU52-001, previously located in former building 17-52 on Safeway property).
2. Buildings formerly identified as 17-234, 17-239, and 17-240 are currently owned by Fana.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- S-28 — Solid Waste Management Unit (SWMU)
- A-05 — Area of Concern (AOC)
- 17-68 — Current Building and Number
- Property Boundary

N

0 600 1200

Scale in Feet

Base map source: Geomatrix 2003

LANDAU ASSOCIATES

Boeing Auburn Facility Auburn, Washington	**All Facility SWMUs and AOCs**	Figure J-1

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Table J-1

Agreed Order Defined Solid Waste Management Units and Areas of Concern

IA. Existing SWMUs & AOCs	IB. Existing SWMUs & AOCs	II. SWMUs & AOCs - Independent remediation work conducted, and/or additional work not needed to meet standards.	
Further action and incorporation into RI needed for both soil and groundwater analysis.	**Further action and incorporation into RI needed for groundwater analysis only.**	**Incorporation into the RI not needed.**	
S-06 Building 17-15 Rinsewater Treatment Plant	S-11 Building 17-45 Active Aqueous Degreasers - Formerly Vapor Degreasers	S-01 Building 17-34 Permitted Container Storage Area	S-24 Building 17-07 Former Cyanide Waste Holding Tank
S-12d Building 17-12 Former Vapor Degreaser; Former Metal Fabrication and Finishing	S-12a Building 17-03 Former Vapor Degreaser; Former Metal Fabrication and Finishing	S-02 Buildings 17-32 & 17-33 Regulated Waste Material Staging Area	S-25 Building 17-07 Former Acid Waste Holding Tank
S-15 Machine Sumps (please see Attachment 7 for a list of sumps).	S-12b Building 17-05 Former Vapor Degreaser (VD-01); Process Assembly; Metal Bonds & Composite Parts	S-03 Outdoor Hazardous Waste Accumulation Areas	S-26 Former North Lagoon
S-16 Building 17-06 Active Aluminum Chip Briquetter (sump and tank).	S-12c Building 17-05 Former Vapor Degreaser (VD-02); Process Assembly, Metal Bonds & Composite Parts	S-04 Indoor Satellite Accumulation Areas	S-27 Former South Lagoon
S-17 Building 17-29 Titanium Chip Bailer (shed, sump, and tank).	S-12f Building 17-68 Former Vapor Degreaser	S-05 Non-hazardous Solid Waste Collection Sites	S-28 Former Waste Pile Sludge Delisting
S-18 Buildings 17-34 (SAU34-002) & 17-35 Miscellaneous Sumps at Chip Sheds	S-13 Building 17-07 Active Vapor Degreaser; Machine Fabrication	S-07a Government Canal	S-29 Former Landfill
A-01 Building 17-06 Former USTs AU-01 and AU-02	S-19 Building 17-05 Former Waste Oil Tank (AU-22); Process Assembly, Metal Bonds & Composite Parts	S-07b Stormwater Treatment Facility	S-31 Building 17-05 Alodine Waste Holding Tank (WHT-01)
A-02c Building 17-08 Former UST (AU-6) Diesel Product Storage	S-30 Former Debris Pile and Burn Pit	S-08 Building 17-45 Active Wet Paint Spray Booths; Sheet Metal Center	S-32 Building 17-05 Waste Holding Tank (WHT-03)
A-02d Building 17-10 Former UST (AU-6) Diesel Product Storage Tank	A-02a Building 17-03 (now demolished). Former USTs (AU-7 & AU-8) Diesel Oil Product Storage	S-09 Building 17-62 Former Wet Paint Spray Booths	S-33 Building 17-06 Waste Holding Tanks (WHT-02, 03, 04, 05); Sking & Spar Fabrication
A-03 Buildings 17-29 & 17-35 Former Unregistered Waste Oil Tanks	A-02b Building 17-06 Former UST (AU-23) Jet Fuel Product Storage	S-10 Building 17-66 Paint Storage Room, Mixing Area & Testing Booth	S-34 Building 17-07 Tank Line Waste Holding Tanks (WHT-01, 02, 03, 04)
A-09 Building 17-07 Acid Scrubber Drain Leak; Machine Fabrication	A-04 Building 17-29 Former Underground Bailer Sump; PS300 - cutting oil and solvents	S-12e Building 17-62 Former Vapor Degreasers (2); Welded Dust Facility	S-35 Building 17-45 Tank Line Waste Holding Tanks (WHT 01, 02, 03) ; Sheet Metal Center
A-12 Fuel Oil Spill - Location unknown.	A-05 Building 17-64 Unleaded Gasoline UST (AU-32); Transporation Building Fuel Island	S-14 Building 17-52 Battery Wash Area	S-36 Building 17-62 Tank Line Waste Holding Tanks (WHT-01, 02, 03, 04); Welded Duct Facility
	A-06 Excavations for the expansion of Building 17-66. Three independent investigations.	S-20 Building 17-05 Former Waste Holding Tank (WHT-02)	S-37 Building 17-68 Tank Line Waste Holding Tanks (WHT-01, 02, 03, 04, 05) Emergent Manufacturing Facility
	A-07 Building 17-08 Former Methyl Ethyl Ketone UST (AU-18)	S-21 Building 17-06 Former Waste Holding Tank (WHT-01)	S-38 Cyclones, Baghouses, and Dust Collectors
	A-08 Building 17-05 Former Metalbond Tank Line; Process Assembly, Metal Bonds & Composite Parts	S-22 Building 17-08 Former Acid Waste Holding Tank (AU-21)	S-39 X-ray & Photographic Laboratories
	A-10 Building 17-10 G&L Post Mill; Tooling/Tool Fabrication	S-23 Building 17-07 Former Alkaline Waste Holding Tank	A-02e Building 17-57 Former USTs (AU-12 & AU-13) Heating Oil Tanks
			A-02f Building 17-58 Former UST (AU-10) PS300 Product Storage Tank
			A-11 Building 17-66 Methyl Phenyl Ketone UST

Abbreviations/Acronyms:

AOC = area of concern
RI = remedial investigation
SWMU = solid waste management unit
UST = underground storage tank

Table J-2

Updated Solid Waste Management Units and Areas of Concern

Column IA SWMUs and AOCs	
SWMU/AOC	**Description**
S-06	17-15 Rinsewater Treatment Plant
S-12d	17-12 Former Vapor Degreaser; Former Metal Fabrication and Finishing
S-15a (a)	17-06 Machine Sump: SAU06-12 (see attachment 7 of Agreed Order)
S-15b (a)	17-07 Machine Sumps: SAU07-024, -025,-028,-029 (see attachment 7 of Agreed Order)
S-15c (b)	17-34 Chip Shed Sumps: SAU34-001 through -004 (see attachment 7 of Agreed Order)
S-15d (c)	17-52 Machine Sump: SAU52-001 (see attachment 7 of Agreed Order)
S-16 (d)	17-06 Active Aluminum Chip Briquetter and Chip Conveyance System
S-17 (e)	17-29 Titanium Chip Bailer (shed and sump)
S-18 (b)	17-35 Miscellaneous sumps at chip shed
A-01	17-06 Former USTs TAU-01 and TAU-02
A-02c	17-08 Former UST (TAU-16) Diesel Product Storage
A-02d	17-10 Former UST (TAU-6) Diesel Product Storage Tank
A-03 (f)	17-35 Former unregistered Waste Oil Tanks
A-09	17-07 Acid Scrubber Drain line Leak; Machine Fabrication
A-12 (g)	Fuel Oil Spill; Southwest of Building 17-09
A-13 (h)	17-06 Petroleum Hydrocarbon Soil and Groundwater Contamination

Column IB SWMUs and AOCs	
SWMU/AOC	**Description**
S-11	17-45 Aqueous Degreaser; Formerly Vapor Degreaser
S-12a	17-03 Former Vapor Degreaser; Former Metal Fabrication and Finishing
S-12b	17-05 Former Vapor Degreaser (VD-01); Process Assembly, Metal Bonds and Composite Parts
S-12c	17-05 Former Vapor Degreaser (VD-02); Process Assembly, Metal Bonds and Composite Parts
S-12f	17-68 Former Vapor Degreaser
S-13a/S-13b (i)	17-07 Former Vapor Degreasers; Machine Fabrication
S-19	17-05 Former Waste Oil Tank (TAU-22); Process Assembly, Metal Bonds, and Composite Parts
S-30	Former Debris Pile and burn pit
A-02a	17-03 Former USTs (TAU-7 and TAU-8)
A-02b	17-06 Former UST (TAU-23) Jet Fuel product storage
A-04 (e)	17-29 Former Underground Bailer Tank; PS300, cutting oil and solvents
A-05	17-64 Unleaded Gasoline UST (TAU-32); Transportation Building Fuel Island
A-06	Excavations for the expansion of 17-66
A-07	17-08 Former Methyl Ethyl Ketone UST (TAU-18)
A-08	17-05 Former Metalbond Tank Line; Process Assembly, Metal Bonds and Composite Parts
A-10	17-10 G&L Post Mill; Tooling/Tool Fabrication
A-14 (j)	Site-wide Groundwater
A-15 (k)	Site-wide Surface Water

Column II SWMUs and AOCs	
SWMU/AOC	**Description**
S-01	17-34 Permitted Container Storage Area
S-02	17-32 and 17-33, regulated Waste Material Staging Area
S-03	Outdoor Hazardous Waste Accumulation Areas
S-04	Indoor Stellite Accumulation Areas
S-05	Nonhazardous Solid Waste Collection Sites
S-07a	Government Canal
S-07b	Storm Water Treatment Facility
S-08	17-45 Active Wet Paint Spray Booths; Sheet Metal Center
S-09	17-62 Former Wet Paint Spray Booths
S-10	17-66 Paint Storage Room, Mixing Area, and Testing Booth
S-12e	17-62 Former Vapor Degreasers (2); Welded Duct Facility

Table J-2

Updated Solid Waste Management Units and Areas of Concern

Column II SWMUs and AOCs (Continued)	
S-14	17-52 Battery Wash Area
S-20	17-05 Former Waste Holding Tank (WHT-02)
S-21	17-06 Former Waste Holding Tank (WHT-01)
S-22	17-08 Former Acid Waste Holding Tank (TAU-21)
S-23	17-07 Former Alkaline Waste Holding Tank
S-24	17-07 Former Cyanide Waste Holding Tank
S-25	17-07 Former Acid Waste Holding Tank
S-26	Former North Lagoon
S-27	Former South Lagoon
S-28	Former Waste Pile Sludge Delisting
S-29	Former Landfill
S-31	17-05 Alodine Waste Holding Tank (WHT-01)
S-32	17-05 Waste Holding Tank (WHT-03)
S-33	17-06 Waste Holding Tanks (WHT-02 through 05); Skin and Spar Fabrication
S-34	17-07 Tank Line Waste Holding Tanks (WHT-01 through 04)
S-35	17-45 Tank Line Waste Holding Tanks (WHT-01 through 03); Sheet Metal Center
S-36	17-62 Tank Line Waste Holding Tanks (WHT-01 through 04); Welded Duct Facility
S-37	17-68 Tank Line Waste Holding Tanks (WHT-01 through 05); Emergent Manufacturing Facility
S-38	Cyclones, Baghouses, and Dust Collectors
S-39	X-ray and Photographic Laboratories
A-02e	17-57 Former USTs (TAU-12, TAU-13) Heating Oil Tanks
A-02f	17-58 Former UST (TAU-10) PS300 Product Storage Tank
A-11	17-66 Methyl Phenyl Ketone UST

Notes:

(a) The Agreed Order lists S-15 as machine sumps and included a number that needed additional investigation. These sumps were further defined in this report for clarity. SAU06-12 was defined as S-15a. SAU07-025 was defined as S-15b. Machine sumps at building 17-34 were defined as S-15c.

(b) The Agreed Order lists S-18 as miscellaneous sumps at chip sheds 17-34 and 17-35. For clarity, these sumps were divided and Building 17-34 machine sumps were assigned as SWMU S-15c and Building 17-35 sumps were assigned as SWMU S-18.

(c) The Agreed Order lists SAU52-001 as S-14 in Attachment 7. This sump has been renamed S-15d for clarity.

(d) The Agreed Order did not include the chip conveyance system in the definition of this SWMU.

(e) The definition of S-17 originally included the shed, sump and tank; however, further investigation indicates that the tank is AOC A-04. Definitions for the SWMU and AOC were updated accordingly.

(f) The Agreed Order lists A-03 as including both 17-29 and 17-35 former unregistered waste oil tanks; however, there were no unregistered waste oil tanks in Building 17-29.

(g) The Agreed Order lists the location of the fuel oil spill as unkown, further investigation indicates that the spill occurred southwest of Building 17-09.

(h) The Agreed Order does not include A-13. This is a new AOC that has been added for the purposes of petroleum hydrocarbon soil and groundwater investigation in Building 17-06. This new AOC encompasses the areas investigation for SWMU S-15a and S-16.

(i) The Agreed Order lists S-13 as active vapor degreaser; however, there were two degreasers (further differentiated as a and b); both have been removed.

(j) The Agreed Order does not include A-14. This is a new AOC that has been added for the purposes of investigation and cleanup of Site-wide groundwater.

(k) The Agreed Order does not include A-15. This is a new AOC that has been added for the purposes of investigation and cleanup of Site-wide surface water.

1. Source for categorization of SWMUs and AOCs is Attachment 2 of the Agreed Order.
2. Column IA SWMUs and AOCs required both soil and groundwater investigation during the RI.
3. Column IB SWMUs and AOCs required only groundwater investigation during the RI.
4. Column II SWMUs and AOCs did not require investigation during the RI

Abbreviations/Acronyms:

AOC = area of concern
SWMU = solid waste management unit
UST = underground storage tank

Table J-3

Summary of Recommendations for Solid Waste Management Units and Areas of Concern to be Addressed in the Feasibility Study

SWMU/AOC	Building	Description	Primary Constituents of Concern	SWMU/AOC to be addressed in Feasibility Study?	Comments (a)
SWMU					
S-06	17-15	Rinsewater Treatment Plant (Wastewater Pre-treatment Plant)	VOCs	No	Evidence of a number of small releases, but these do not appear to have caused significant soil or groundwater contamination. VOC concentrations in groundwater will be addressed as part of the Site-wide VOC impacts.
S-11	17-45	Aqueous Degreasers; Formerly Vapor Degreasers	VOCs	No	There is no evidence of a release associated with these degreasers.
S-12a	17-03	Former Vapor Degreaser; Former Metal Fabrication and Finishing	VOCs	No	Letter of determination for NFA received as part of the Area 1 RI. There was likely a release from the former degreaser or associated piping; however, the release/releases were not extensive and groundwater flux has depleted much of the mass from the source area. VOC concentration in groundwater will be addressed as part fo the Site-wide VOC impacts. (b)
S-12b	17-05	Former Vapor Degreaser (VD-01); Process Assembly, Metal Bonds, and Composite Parts	VOCs	No	IRA completed in 2004 to 2005; TCE concentrations are now non-detect. Remaining VOC concentrations in groundwater will be addressed as part of the Site-wide VOC impacts.
S-12c	17-05	Former Vapor Degreaser (VD-02); Process Assembly, Metal Bonds, and Composite Parts	VOCs	No	Letter of determination for NFA received as part of the Area 1 RI.
S-12d	17-12	Former Vapor Degreaser; Former Metal Fabrication and Finishing	VOCs	No	There is no evidence of a release from this former degreaser.
S-12f	17-68	Former Vapor Degreaser	TCE	No	There is no evidence of a release from this former degreaser.
S-13a/b	17-07	Fomer Vapor Degreasers; Machine Fabrication	VOCs	No	Threre is no evidence of a release from the TCA degreaser (S-13b). There was likely a release from the former TCE degreaser (S-13a); however, the release/releases were not extensive and groundwater flux has depleted much of the mass from the source area. VOC concentrations in groundwater will be addressed as part of the Site-wide VOC impacts.
S-15a/S-16	17-06	Machine Sump (SAU06-12)/ Active Aluminum Chip Briquetter and Chip Conveyance System	TPH	No	Petroleum hydrocarbon contamination (DRO and ORO) exceeds screening levels; however, the concentrations do not appear to be related to S-15a or S-16. The petroleum hydrocarbon contamination will be addressed as part of the general petroleum hydrocarbon contamination in Building 17-06 (A-13). Detections of VOCs in groundwater will be addressed as part of the Site-wide VOC impacts.
S-15b	17-07	Machine Sumps SAU07-024,-025,-028,-029	TPH	No	There is no evidence of a release from these machine sumps in Building 17-07.
S-15c	17-34	Chip Shed Sumps (SAU34-001 through -004)	TPH	No	There is no evidence of a release from these chip shed sumps.
S-15d	17-52	Machine Sump (SAU52-001)	TPH, Metals	No	Letter of determination for NFA received as part of transfer of the south Site to Safeway.
S-17	17-29	Titanium Chip Bailer (Shed and Sump)	TPH	No	There is no evidence of a TPH release at this SWMU. Detections of VOCs in groundwater in this area will be addressed as part of the Site-wide VOC impacts.
S-18	17-35	Miscellaneous Sumps at Chip Shed	TPH	No	There is no evidence of a release at this SWMU. Detections of VOCs will be addressed as part of the Site-wide VOC impacts.
S-19	17-05	Former Waste Oil Tank (TAU-22); Process Assembly, Metal Bonds, and Composite Parts	TPH	No	Letter of determination for NFA received as part of the Area 1 RI.
S-30	17-10	Former Debris Pile and Burn Pit	TPH, VOCs, Metals	No	Concentrations of TCE and VC north and downgradient of this SWMU do not indicate a significant release from this SWMU. Detections of VOCs in groundwater in this area will be addressed as part of the Site-wide VOC impacts.
AOC					
A-01	17-06	Former USTs (TAU-01 and TAU-02)	TPH, BTEX	**Yes**	Petroleum hydrocarbon related constituents (DRO, GRO, BTEX) are above screening levels. Concentrations of VOCs at this area will be addressed as part of the Site-wide VOC impacts.
A-02a	17-03	Former USTs (TAU-7 and TAU-8)	TPH	No	Letter of determination for NFA received as part of the Area 1 RI.
A-02b	17-06	Former UST (TAU-23) Jet Fuel Product Storage	TPH	No	There is no evidence of a release from this former UST.
A-02c	17-08	Former UST (TAU-16) Diesel Product Storage	TPH	No	There is no evidence of a release from this former UST.

Table J-3

Summary of Recommendations for Solid Waste Management Units and Areas of Concern to be Addressed in the Feasibility Study

SWMU/AOC	Building	Description	Primary Constituents of Concern	SWMU/AOC to be addressed in Feasibility Study?	Comments (a)
A-02d	17-10	Former UST (TAU-6) Diesel Product Storage Tank	TPH	No	There is no evidence of a release from this former UST.
A-03	17-35	Former Unregistered Waste Oil Tanks	TPH	No	There is no evidence of a release from these former waste oil tanks. Detections of VC will be addressed as part of the Site-wide VOC impacts.
A-04	17-29	Former Underground Titanium Chip Bailer Tank; PS300, cutting oil, and solvents	TPH	No	There is no evidence of a release from this sump.
A-05	17-64	Unleaded Gasoline UST (TAU-32); Transportation Building Fuel Island	TPH	No	There is no evidence of a release from this former UST.
A-06	17-66	Excavations for the expansion of 17-66	TPH, VOCs, Metals	No	There is evidence of a minor release of TCE and related constituents to groundwater in this area. However, current concentrations are below screening levels. Impacts from releases were minor and have been largely addressed through soil removal and natural attenuation.
A-07	17-08	Former MEK UST (TAU-18)	MEK/2-butanone	No	There is no evidence of a release from this former UST. Detections of TCE will addressed as part of the Site-wide VOC impacts.
A-08	17-05	Former Metalbond Tank Line; Process Assembly, Metal Bonds, and Composite Parts	VOCs	No	IRA completed in 2004 to 2005; TCE concentrations are now non-detect. Remaining VOC concentrations in groundwater will be addressed as part of the Site-wide VOC impacts.
A-09	17-07	Acid Scrubber Drain Line Leak; Machine Fabrication	Metals, Cyanide	**Yes**	Metals contamination was left in place in soil above screening levels and has resulted in metals contaminated groundwater.
A-10	17-10	G&L Post Mill; Tooling/Tool Fabrication	TPH, VOCs	No	Minor historical exceedence of petroleum hydrocarbon (ORO) screening levels occured at well AGW038. Detections of VOCs will be addressed as part of the Site-wide VOC impacts.
A-12	17-09	Fuel Oil Spill; southwest of Building 17-09	TPH	No	There is no evidence of a significant release associated with this fuel oil spill.
A-13	17-06	Petroleum contamination in soils and groundwater	TPH	**Yes**	Soil and groundwater exceddences of screening levels for petroleum hydrocarbons (DRO and ORO).
A-14	Site-wide	Site-wide TCE and VC concentrations in groundwater	TCE, VC	**Yes**	Groundwater exceedences of screening levels for TCE and VC.
A-15	Site-wide	Site-wide TCE and VC concentrations in surface water	TCE, VC	**Yes**	Detections of TCE and VC in surface water.

Notes:

1. SWMUs and AOCs discussed in the table include all Column IA and IB SWMUs and AOCs listed in Attachment 2 of the Agreed Order (See Table J-1) and updated for the RI (See Table J-2).
2. The Remedial Investigation Report (LAI 2017b) provides additional information and discussion about individual SWMUs and AOCs.
3. TPH stands for petroleum hydrocarbons (can include DRO, ORO, or GRO).
4. MEK is the same as 2-Butanone.
5. Green highlighting indicates SWMUs or AOCs that will be carried forward to the FS.

(a) Rationale for comments provided is discussed further in the RI Report.

(b) Additional evaluations were completed in the vicinity of SWMU S-12a during the FS. The additional descriptions of the possible release from SWMU S-12a were not included in the RI report, but will be discussed in the FS.

Abbreviations/Acronyms:

AOC = area of concern
BTEX = benzene, toluene, ethylbenzene, and xylenes
DRO = diesel-range organics
FS = feasibiility study
GRO = gasoline-range organics
IRA = interim remedial action
MEK = methyl ethyl ketone
NFA = No Further Action
ORO = oil-range organics
RI = remedial investigation
SWMU = solid waste management unit
TCA = trichloroethane
TCE = trichloroethene
TPH = total petroleum hydrocarbons
UST = underground storage tank
VC = vinyl chloride
VOC = volatile organic compounds

Table J-4

Summary of Corrective Actions Implemented

SWMU/AOC	Building Number	Description	Corrective Action Implemented	Reports Submitted (a)
SWMU S-01	17-34	Former hazardous waste sump at permitted >90 day waste storage facility	Contaminated soil removed to depth of groundwater. Concentrations of VOCs above MTCA drinking water standards.	Notification of subsurface impacted by VOCs (2/26/86). Subsurface Investigation (Woodward Clyde 1997).
SWMU S-07	West property boundary	Government Canal	Excavation of contaminated soil, no further action designation from Ecology.	Government Canal, Independent Remedial Action (Charlton & Leach 1995). Government Canal - Phase II Investigation (GeoEngineers 1992). Government Canal - Drainage Assessment (Tetra Tech, Inc. 1991). Government Canal - Drainage System, Preliminary Assessment (Tetra Tech, Inc. 1992). Risk Assessment for Boeing Government Canal (McLaren Hart 1992).
SWMU S-12a	17-03	Former Vapor Degreaser; Former Metal Fabrication and Finishing	Letter of determination for NFA received as part of the Area 1 RI.	N/A
SWMU S-12b	17-05	Former Vapor Degreaser (VD-01); Process Assembly, Metal Bonds, and Composite Parts	IRA completed in 2004 to 2005; TCE concentrations are now non-detect. Remaining VOC concentrations in groundwater will be addressed as part of the Site-wide VOC impacts.	N/A
SWMU S-12c	17-05	Former Vapor Degreaser (VD-02); Process Assembly, Metal Bonds, and Composite Parts	Letter of determination for NFA received as part of the Area 1 RI.	N/A
SWMU S-15d	17-52	Machine Sump (SAU52-001)	Letter of determination for NFA received as part of transfer of the south Site to Safeway.	N/A
SWMU S-19	17-05	Former Waste Oil Tank (TAU-22); Process Assembly, Metal Bonds, and Composite Parts	Letter of determination for NFA received as part of the Area 1 RI.	N/A
SWMU S-22	17-68	Acid waste tank (AU-21)	250 cy of soil removed, final soil and groundwater excavation samples were below MTCA CULs.	17-08: Acid Sump Removal (Kennedy Jenks 1993)
SWMU S-23	17-07	Waste hold tank	Excavation during tank removal and valve pit excavation indicated release. Residual cadmium in soil at valve pit exceeded MTCA CULs. Clean closure of tank accepted by Ecology.	17-07 Final Closure Report for Alkaline Waste Hold Tank (Kennedy Jenks 1994). 17-07: Supplemental Closure Report (Kennedy Jenks 1994). 17-07 Closure Report for Waste Hold Tank (Kennedy Jenks 1993).
SWMU S-24	17-07	RCRA acid tank	Excavation of contaminated soil associated with leaking acid scrubber drain line. Groundwater monitoring in area is ongoing.	17-07: RCRA Acid and Cyanide Tank Closure Report (AGI 1996).
SWMU S-25	17-07	RCRA cyanide tank	Excavation of contaminated soil associated with leaking acide scrubber drain line. Groundwater monitoring in area is ongoing.	17-07: RCRA Acid and Cyanide Tank Closure Report (AGI 1996).
SWMU S-30	17-10	West building expansion	4,700 cy of soil removed, final excavation samples were below MTCA CULs.	17-10: Soil Excavation Monitoring (Landau Associates 1990).
AOC A-01	17-06	Diesel tank (AU-1)	Removal of contaminated soil, final soil excavation samples were below MTCA CULs, groundwater samples indicated the presence of hydrocarbons.	UST Closure Report (1/5/93). 17-06: Subsurface Assessment of 2 USTs (GeoEngineers 1991). UST Groundwater Monitoring 1987-1992 (Dames & Moore 1992). Soil Sampling & Priority Analysis for Auburn USTs (Norton Corrosion Ltd., Inc. 1985). 17-06: Drilling Additional Soil Borings (GeoEngineers 1992).
AOC A-01	17-06	Gasoline tank (AU-2)	Removal of contaminated soil, final soil excavation samples were below MTCA CULs, groundwater samples indicated the presence of hydrocarbons.	UST Closure Report (1/5/93). 17-06: Subsurface Assessment of 2 USTs (GeoEngineers 1991). UST Groundwater Monitoring 1987-1992 (Dames & Moore 1992). Soil Sampling & Priority Analysis for Auburn USTs (Norton Corrosion Ltd., Inc. 1985). 17-06: Drilling Addit
AOC A-02a	17-03	Former USTs (TAU-7 and TAU-8)	Letter of determination for NFA received as part of the Area 1 RI.	N/A
AOC A-04	17-29	Former titanium bailer sump	Excavated 200 cy of hydrocarbon-impacted soil. Soil samples indicated hydrocarbons above MTCA CULs.	17-29: Titanium Bailing Area (GeoEngineers 1997). 17-29 Sumpr Removal and Replacement (GeoEngineers 1991).
AOC A-05	17-64	Unleaded gasoline UST	200 cy of tank bedding removed - all concentrations below MTCA CULs.	Soil Sampling & Priority Analysis for Auburn USTs (Norton Corrosion Ltd., Inc. 1985). Underground Storage Tanks #31 & 32 (Auburn Environmental Engineering 1996). 17-64: Indpendent Action Clean up Report (BCAG 1993).
AOC A-06	17-66	Excavations for building expansion	Contaminated soil removed in several areas. Results of final excavation below MTCA CULs.	17-66: Report of Cleanup Action (Kennedy Jenks 1993). 17-66: Hydrogeologic Investigation (Kennedy Jenks 1994). 17-66: Compliance Monitoring Report (Kennedy Jenks 1992). 17-66: Independent Remedial Action (Kennedy Jenks 1993).

Table J-4

Summary of Corrective Actions Implemented

SWMU/AOC	Building Number	Description	Corrective Action Implemented	Reports Submitted (a)
AOC A-07	17-08	MEK tank & dispensing area (AU-18)	Removal of contaminated soil (10 cy disposed of offsite) final soil excavation samples were below MTCA CULs.	Removal of Methyl Ehtyl Ketone UST (GeoEngineers 1992). UST Groundwater Monitoring 1987-1992 (Dames & Moore 1992). Soil Sampling & Priority Analysis for Auburn USTs (Norton Corrosion Ltd., Inc. 1985). Hydrogeologic Investigation & Summary (Kennedy Jenks 1996). 17-08: Environmental Response Action (Kennedy Jenks 1994).
AOC A-08	17-05	Former Metalbond Tank Line; Process Assembly, Metal Bonds, and Composite Parts	IRA completed in 2004 to 2005; TCE concentrations are now non-detect. Remaining VOC concentrations in groundwater will be addressed as part of the Site-wide VOC impacts.	N/A
AOC A-10	17-10	G&L Post Mill	Ongoing goundwater monitoring.	17-10: Preliminary Subsurface Assessment Investigation (SECOR 1996).

Notes:

1. The SWMUs and AOCs discussed in this table are a subset of the site SWMUs and AOCs. This table discusses the SWMUs and AOC where remediation has occurred or a no further action letter of determination were issued.

(a) During the RCRA Facility Assessment (RFA), references prior to 1997 were provided to Ecology and EPA as part of Boeing Auburn RCRA Facility Response Letter and Attachments submitted on September 27, 1997. All other SWMU and AOC references are discussed in the RI Report.

Abbreviations/Acronyms:

AOC = Area of Concern
cy = cubic yard
CUL = cleanup level
Ecology = Washington State Department of Ecology
EPA = US Environmental Protection Agency
MEK = methyl ethyl ketone
MTCA = Model Toxics Control Act
N/A = No reports were submitted with the RFA. Reports documenting these SWMUs and AOCs are discussed in the RI Report
RCRA = Resource Conservation Recovery Act
RFA = RCRA Facility Assessment.
SWMU = solid waste management unit
UST = underground storage tank
VOC = volatile organic compound

SECTION K: OTHER FEDERAL AND STATE LAWS

40 CFR 270.14(b)(20); 270.3

SECTIONS

TABLE

Introduction

This section addresses the environmental permits and approvals for the Boeing Auburn Facility.

K-1 FEDERAL, STATE, AND LOCAL LAWS

Federal, state, and local permits held by the Boeing Auburn Facility are listed in Table K-1.

Due to the geographic/topographic siting and location of the Boeing Auburn Facility, the following federal and state laws are not applicable to the overall Boeing Auburn Facility:

- Wild and Scenic Rivers Act
- National Historic Preservation Act of 1966
- Coastal Zone Management Act
- Washington Shoreline Management Act
- Fish and Wildlife Coordination Act
- Atomic Energy Act.

K-2 STATE ENVIRONMENTAL POLICY ACT CHECKLIST

As part of the implementation of the AO, Ecology issued a determination of non-significance pursuant to the State Environmental Policy Act (Revised Code of Washington 43.21c for the RI, FS, and interim actions under the AO.

TABLE K-1
Summary of Applicable Federal, State, and Local Laws

Federal Law	State Law	Program	Administering Agency	Comments
Resource Conservation and Recovery Act (RCRA)	Washington State Hazardous Waste Management Act	Hazardous Waste, Treatment, Storage, and Disposal	Washington State Department of Ecology	RCRA Permit No. WAD 041337130
		Underground Storage Tanks (UST)	Washington State Department of Ecology	UST Registration No. 178-005-030
		Washington State Model Toxics Control Act (MTCA)	Washington State Department of Ecology	Boeing Auburn has conducted voluntary cleanups responsibilities for RCRA Corrective Action per Agreed Order No. 01HWTRNT-3345
		Hazardous Waste Reduction	Washington State Department of Ecology	All processes in place at the Boeing Auburn Facility are intended to reduce the generation of hazardous. This can be demonstrated via the pollution prevention plan and corporate hazardous waste reduction goal setting known as the EHS 4-Walls metrics
Clean Water Act	Washington State Water Pollution Control Act	Industrial Wastewater Discharge	King County Department of Natural Resources (KCDNR), Wastewater Division (b)	KCDNR Sanitary Sewer Discharge Permit No. 7599
		Stormwater Discharge	Washington State Department of Ecology	Industrial Stormwater Permit No. WAR-000221
		Wetland Protection	Washington State Department of Ecology	Class I wetlands located on property
Clean Air Act Amendments	Washington State Clean Air Act	Operating Permits	Puget Sound Clean Air Agency (PSCAA)	PSCAA Registry No. 13117 (see Section B for a list of registered equipment).
Endangered Species Act		Protection of Endangered Species	US Fish and Wildlife Service	Potential salmon habitat located at Government Canal.
Toxic Substances Control Act		Management of toxic substances, including polychlorinated biphenyls (PCBs).	US Environmental Protection Agency	Boeing Auburn has a program in place and is in the process of removing PCBs from potential PCB-containing equipment.

SECTION L: PART B CERTIFICATION

PART B CERTIFICATION

WAC 173-303-806(4)(a); 173-303-810(12) and (13)

40 CFR 270.11

CERTIFICATION

In accordance with 40 CFR 270.11(d) and Washington State Dangerous Waste Regulations, WAC 173-303-810(13), the following certification is made in reference to the March 2018 Part B Application for the Boeing Auburn Facility located in Auburn, Washington.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ Date: _____

(Signature will be added when final permit application is submitted)

Jack Meehan

Boeing Auburn Site Leader[4]

Boeing Auburn Fabrication Division Plant

[4] The Boeing Auburn Site Leader title is equivalent to a Vice President title.

REFERENCES

Ecology. 2006. First Amended Agreed Order No. 01HWTRNR-3345; In the Matter of Remedial Action by: The Boeing Company and AMB Property Corporation, to The Potentially Liable Parties. State of Washington Department of Ecology. April 7.

LAI. 2017a. Draft: Quality Assurance Project Plan, Boeing Auburn Facility, Auburn, Washington. Landau Associates, Inc. February 9.

LAI. 2017b. Remedial Investigation Report, Boeing Auburn Facility, Auburn, Washington. Landau Associates, Inc. September 15.

LAI. 2017c. Sampling and Analysis Plan, Boeing Auburn Facility, Auburn, Washington. Landau Associates, Inc. February 9.

LAI. 2018. Technical Memorandum: Phase 8 Interim Groundwater Monitoring Program, Boeing Auburn Facility, Auburn, Washington. Landau Associates, Inc. March 14.

Tetra Tech. 1998. The Boeing Company Auburn Fabrication Division Auburn, Washington, Resource Conservation and Recovery Act Facility Assessment, Final Conclusions and Recommendation. June 19.

APPENDIX G-1

Comprehensive Contingency Plan

December, 2017

BOEING AUBURN SITE COMPREHENSIVE CONTINGENCY PLAN

Comprehensive Contingency Plan – Executive Summary and Quick Reference Guide

The Comprehensive Contingency Plan outlines the processes that should be followed by groups at Boeing Auburn that respond to environmental emergencies. It also describes the initial reporting requirements associated with those events. The plan is required by WAC 173-303-350 and allows the Emergency Response Coordinator to commit any resources necessary to the containment and cleanup of spills and other environmental emergencies.

The plan is typically updated on an annual basis. Primary changes this year include:

- Adding a quick reference guide to the Executive Summary in response to Executive Order 13650 on Chemical Facility Safety and Security.
- Updated equipment descriptions and locations associated with the Auburn Site Prevention and Emergency Equipment table (12-1)
- Updated section 6.3.1 regarding mutual aid
- Added a section differentiating between the Emergency Response Coordinator for Environmental and the Emergency Preparedness Focal for Fire and Security.
- Updated the document to include the new name for Facility Asset Management (FAM) (in place of 'Site Services').
- Made it more clear that Facility Asset Management is typically responsible for contacting emergency cleanup contractors under their 'emergency services' contract.
- Updated health and safety contact from Breyan Paske to Cory Cranston and added Roger Wheeler as a contact for hazmat team technical knowledge.

The plan will be provided to the following groups:

- Offsite
    - Auburn Regional Medical Center
    - City of Auburn Police
    - Harborview Medical Center
    - King County Department of Natural Resources
    - King County Office of Emergency Planning
    - Stericycle
    - Valley Regional Fire Authority
    - Roger Wheeler (online access)
    - Bob Manipis (online access)
- Onsite
    - John Sherman
    - Tessa Higgins/Env team
    - Jack Meehan (online access)
    - Cari Schermacher (online access)
    - Jeff Cassell (online access)
    - Paul Spirup (online access)
    - Hazmat Van
    - Fire Command Vehicle
    - Fire Engine
    - Doug Tillotson (online access)

Quick Reference Guide

Types of hazardous waste and associated hazards at Boeing Auburn Site, including disposal estimates for 2016:

%	2016 Generation (Pounds)	Waste Type	Hazard
27%	1,030,544	Wastewater Treatment Sludge	Heavy Metals
19%	728,163	Acids	Corrosive
15%	561,114	Alkalines	Corrosive
14%	518,267	Miscellaneous	Varies
9%	345,931	Debris	Heavy Metals
7%	251,481	Paint and Solvent Related Liquids	Flammable
5%	187,481	Containers	Varies
3%	119,910	Oils and Oily Debris	WA Toxic
0%	16,856	Universal Waste	Heavy Metals
0%	20	Composite	N/A

Disposal methods for hazardous waste at Auburn Site:

%	2016 Generation (Pounds)	Waste Disposal Method
25%	946,946	Direct Landfill Subtitle C
5%	174,872	Direct Landfill Subtitle D
8%	319,127	Macroencapsulation (then landfill)
1%	46,065	Landfill Solidification
11%	397,344	Landfill Stabilization
7%	251,652	Thermal Fuels Blending
3%	129,617	Thermal Incineration
0%	3,221	Recycle Batteries
0%	13,635	Recycle Lamps
37%	1,383,411	Treatment Neutralization
2%	93,876	Wastewater Treatment

More generally, the above listed disposal methods add up to:

%	Generalized Disposal Method
50%	Landfill
0%	Recycle
39%	Wastewater Treatment
10%	Incineration/Fuels Blending

See the end of this summary or section 5, map 2, 'Hazardous Waste Accumulation Areas' for hazardous waste accumulation area layout and section 5, map 8, 'Evacuation Map' for evacuation information.

Water is supplied to Boeing Auburn through the City of Auburn, which gets their water from wells (groundwater). Water is available for emergency response from the following locations on site:

- Fire hydrants throughout the site
- Fire Trucks, stored at the 17-16 building on the east side of the site

- Fire Water Storage Tanks, 17-79 building
- Spigots at the following locations:
    - Drumyard (17-32 building)
    - Wastewater Pretreatment Plant (17-15 building)
    - Fire Station (17-16 building)
    - Steam Clean (17-38 building)
- Tanker transfer stations at the following locations:
    - South side of the 17-07 building in scrubber alley
    - North side of the 17-45 building
    - NE corner of the 17-06 building
    - East side of the 17-68 building (two locations)
    - West side of the 17-62 building

On-site notification systems that would be used during an emergency include:

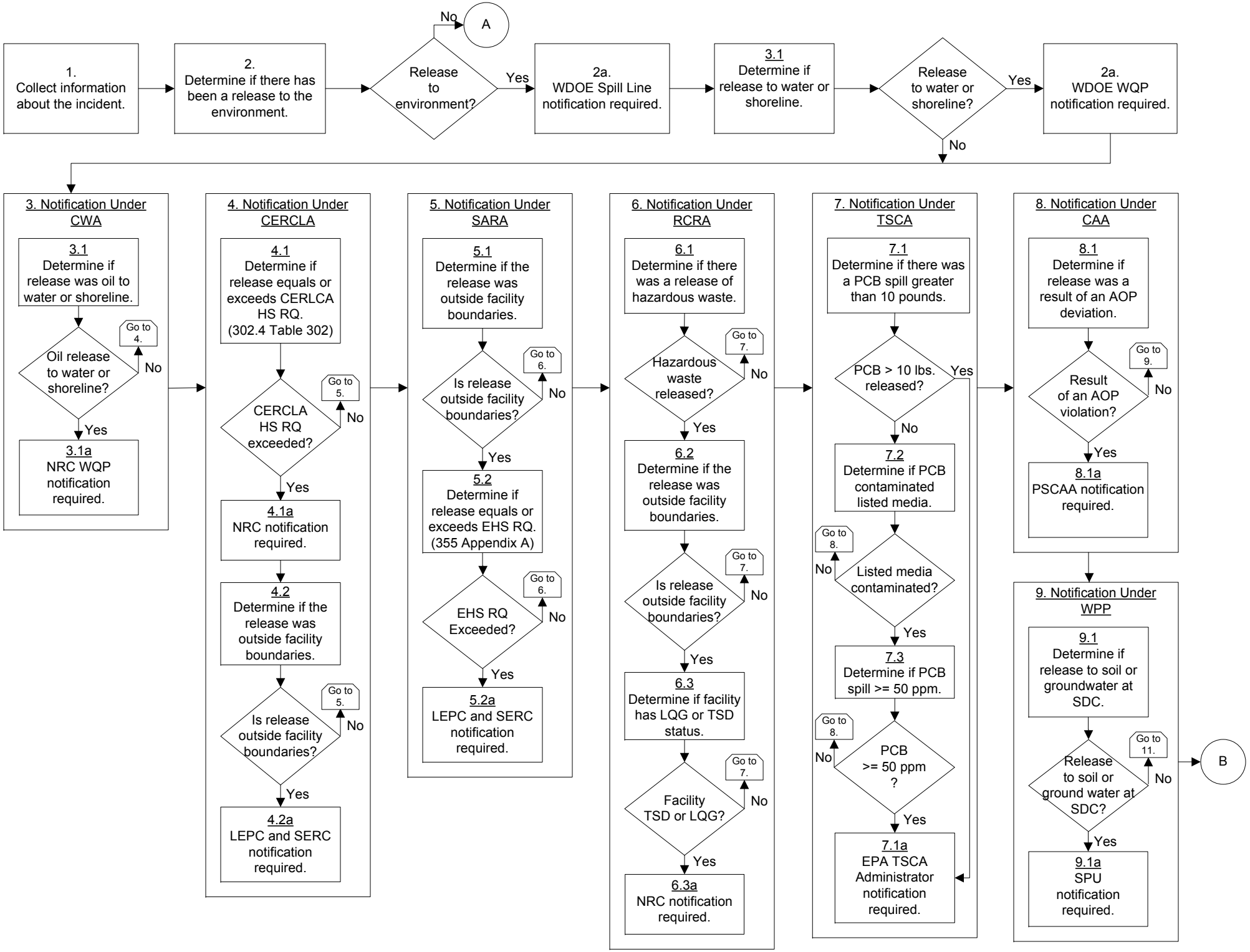
- Word of mouth (for evacuations, shelter in place)
- Horns (for evacuation)
- Whistles (for shelter in-place)
- Desktop Emergency Notification System (DENS) (for providing information about emergencies to people's computers)
- Alarms, often both audible and visual, for process related issues (pH out of range, high-high, low, low, scrubber failure, etc.
- Portable loudspeakers (when applicable) used by security and fire
- Hazmat and Fire Department paging system
- Two way radios
- Cell phones or desk phones

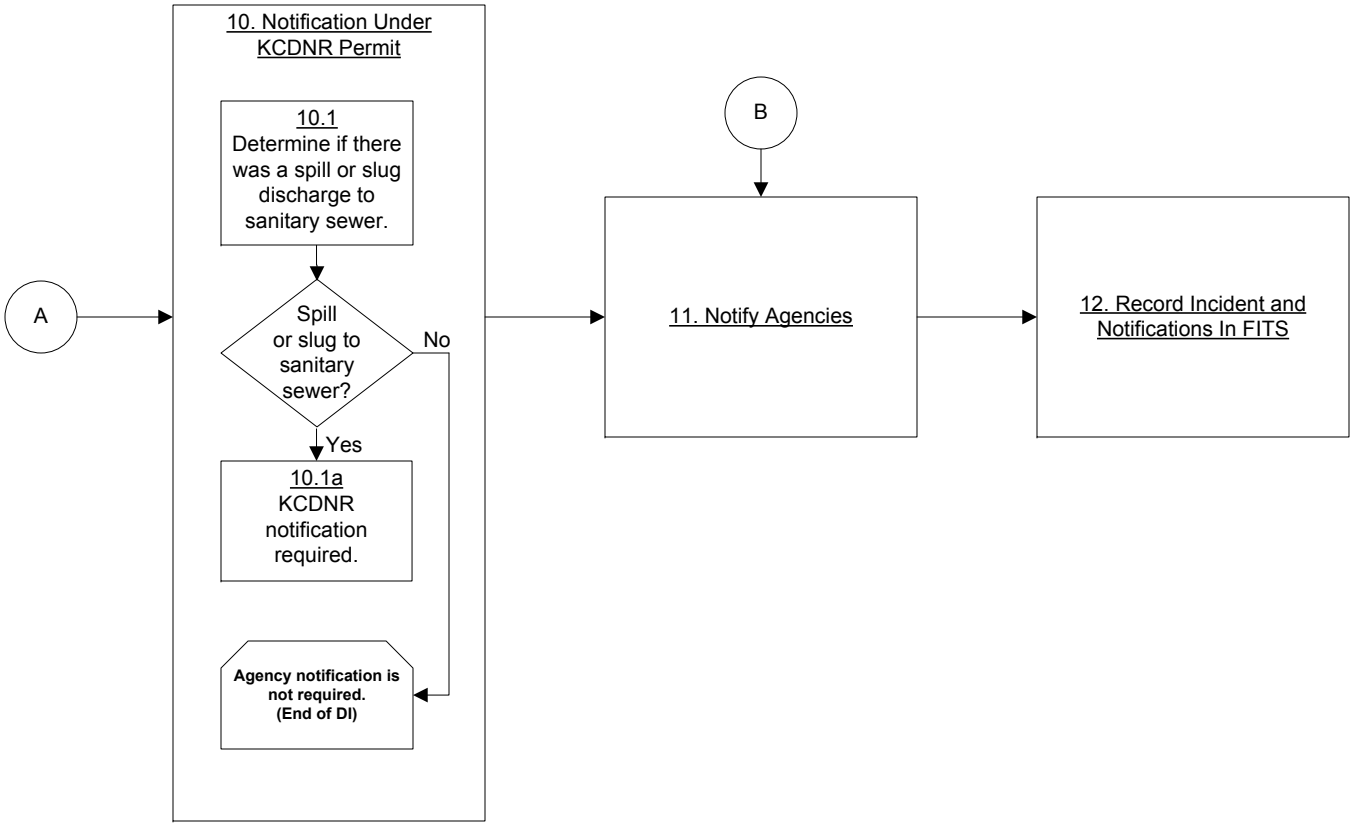
Environmental Emergency Coordinators and their contact information include:

Function	Name	Phone
Primary	Tessa Higgins	360-509-2124
Alternate	Jim Swortz	360-790-1767
Alternate	Peter Weickmann	253-951-6771
Alternate	John Sherman	253-218-5053
Alternate	Terry Tomt	253-304-2979
Secondary Alternate	EHS On-Call Person	253-259-1254

The Environmental Emergency Response Reporting Process Flow document is available to aid determination of which environmental agencies to report emergencies to. It is found in Appendix 1 and at the back of the Executive Summary.

Please contact Tessa Higgins (360-509-2124) or John Sherman (253-218-5053) with questions regarding this summary or the Comprehensive Contingency Plan. Thank you.


1.
Collect information about the incident.
2.
Determine if there has been a release to the environment.
Release to environment?
No
A
Yes
2a.
WDOE Spill Line notification required.
3.1
Determine if release to water or shoreline.
Release to water or shoreline?
Yes
No
2a.
WDOE WQP notification required.
3. Notification Under CWA
3.1
Determine if release was oil to water or shoreline.
Oil release to water or shoreline?
Go to 4.
No
Yes
3.1a
NRC WQP notification required.
4. Notification Under CERCLA
4.1
Determine if release equals or exceeds CERLCA HS RQ. (302.4 Table 302)
CERCLA HS RQ exceeded?
Go to 5.
No
Yes
4.1a
NRC notification required.
4.2
Determine if the release was outside facility boundaries.
Is release outside facility boundaries?
Go to 5.
No
Yes
4.2a
LEPC and SERC notification required.
5. Notification Under SARA
5.1
Determine if the release was outside facility boundaries.
Is release outside facility boundaries?
Go to 6.
No
Yes
5.2
Determine if release equals or exceeds EHS RQ. (355 Appendix A)
EHS RQ Exceeded?
Go to 6.
No
Yes
5.2a
LEPC and SERC notification required.
6. Notification Under RCRA
6.1
Determine if there was a release of hazardous waste.
Hazardous waste released?
Go to 7.
No
Yes
6.2
Determine if the release was outside facility boundaries.
Is release outside facility boundaries?
Go to 7.
No
Yes
6.3
Determine if facility has LQG or TSD status.
Facility TSD or LQG?
Go to 7.
No
Yes
6.3a
NRC notification required.
7. Notification Under TSCA
7.1
Determine if there was a PCB spill greater than 10 pounds.
PCB > 10 lbs. released?
Yes
No
7.2
Determine if PCB contaminated listed media.
Listed media contaminated?
Go to 8.
No
Yes
7.3
Determine if PCB spill >= 50 ppm.
PCB >= 50 ppm ?
Go to 8.
No
Yes
7.1a
EPA TSCA Administrator notification required.
8. Notification Under CAA
8.1
Determine if release was a result of an AOP deviation.
Result of an AOP violation?
Go to 9.
No
Yes
8.1a
PSCAA notification required.
9. Notification Under WPP
9.1
Determine if release to soil or groundwater at SDC.
Release to soil or ground water at SDC?
Go to 11.
No
Yes
9.1a
SPU notification required.
B


10. Notification Under KCDNR Permit
10.1 Determine if there was a spill or slug discharge to sanitary sewer.
A
Spill or slug to sanitary sewer?
No
Yes
10.1a KCDNR notification required.
Agency notification is not required. (End of DI)
B
11. Notify Agencies
12. Record Incident and Notifications In FITS

December, 2017

COMPREHENSIVE CONTINGENCY PLAN

for

Auburn Site
700 15th Street SW
Auburn, WA 98002

DMS Document
239-08-086
Revision J

AUBURN SITE
COMPREHENSIVE CONTINGENCY PLAN (CCP)

Table of Contents

List of Figures

List of Tables

List of Appendices

1.0 USING THIS MANUAL

1.1 Introduction

This Comprehensive Contingency Plan (CCP) describes emergency procedures that the Boeing Auburn Site intends to implement in the event of an emergency circumstance including a hazardous substance or dangerous waste release to the air, soil, receiving water, or groundwater, or a fire, explosion, or natural disaster. This plan has been developed to meet all regulatory requirements for a contingency plan or an emergency response plan, i.e., SARA Title III, Washington State Dangerous Waste Regulations, HAZWOPER, etc. This plan is designed to reduce or minimize injury to personnel and the public, impact to the environment, and damage to property. It provides procedures for emergency response, coordination with external organizations, and documentation required by environmental regulations during an incident.

1.1.1 Facility Description

Auburn Site is a Boeing airplane part fabrication facility. With the exception of the 17-62 Building, Auburn Site is located within the City of Auburn, Washington. The 17-62 Building is located within the City of Algona, Washington. The site is located in King County. The street address for the Site is:

Boeing Auburn Site
700 15th Street SW
Auburn, Washington 98002

The site includes approximately 32 buildings and 331 acres of land at the south end of Auburn, south of Hwy-18 and east of Hwy-167. The Supermall and Hwy-18 are directly north of Auburn Site; Government Services Agency (GSA), AMB, and Safeway are east of the site; The City of Algona and the Union Pacific Railroad border the West end of the site; Hwy-167 is also west of the site; and the City of Pacific is in the vicinity of the South end of the site.

Security Gates A-5 off of Perimeter Road, and A-13 off of 1st Avenue North are the two primary gates providing access to the Site. Gate A-4 is the primary access for trucks.

Operations at Auburn Site include the manufacture of airplane component structures and associated parts. Manufacturing activities include, but are not limited to: metal forming and milling, non-metal forming and milling, conversion coating, painting and other surface treatments, and composite manufacturing. The primary Standard Industrial Classification (SIC) code is 3728 (Aircraft Parts & Auxiliary Equipment, Not Elsewhere Classified).

1.2 Plan Organization

The Auburn Site CCP is organized into three segments, as described below:

Segment 1: Introductory Material:

- Section 1 Using This Manual
- Section 2 Superfund Amendment and Reauthorization Act (SARA) Title III & OSHA Hazardous Waste Operations (HAZWOPER)
- Section 3 Emergency Response Organization Roles and Responsibilities

Segment 2: Emergency Response Plans:

- Section 4 Emergency Situations (includes hazardous release, fire/explosion, medical, and natural disaster emergencies)

Segment 3: Supplementary Information:

- Section 5 Maps
- Section 6 Site Control, Evacuation Plans, and External Agency Agreements
- Section 7 Reporting
- Section 8 Post Incident Follow-Up
- Section 9 Personnel Training
- Section 10 Comprehensive Contingency Plan Authorization to Commit Resources
- Section 11 Chemical List
- Section 12 Equipment List
- Section 13 Contact/Telephone List
- Section 14 List of Acronyms

Four types of emergencies are covered under this CCP: Hazardous/Dangerous Waste or Chemical Release; Fire/Explosion; Medical Emergency; and Natural Disasters.

The emergency section contains:

- Flow charts that describe the sequence of emergency response activities.
- Roles and responsibilities of incident support personnel.
- References to site specific information such as phone lists, equipment lists and chemical lists.
- A checklist for each incident type, which includes the information required for notification and reporting.

1.3 Comprehensive Contingency Plan (CCP) Procedures

The procedures in this CCP are designed to accomplish the following objectives:

- Ensure proper response.
- Coordinate outside assistance.
- Maintain order during the incident.
- Facilitate documentation of evidence as to possible cause, nature, and extent of the incident.

This CCP, as stipulated in regulations under Washington State Department of Ecology (Ecology) and the Environmental Protection Agency (EPA), is subject to review and possible amendment by Auburn Environmental when:

- Auburn Site Resource Conservation and Recovery Act (RCRA) permits are revised.
- The contingency plan fails in an emergency.
- Regulations change.
- The design, construction, operation, or maintenance of Auburn Site change or other circumstances develop that materially increase the potential for fires, explosions, or releases of dangerous substance, or changes in the response necessary in any emergency.
- The list of Incident Commanders (IC) or Site Emergency Response Coordinator for Environmental (ERC) changes.
- The list of emergency equipment substantially changes.

If this CCP is amended, the revised sections of the plan will be prepared and distributed by Auburn Environmental to appropriate local agencies and to Site personnel responsible for implementing the plan. Records of the Contingency Plan revisions and distribution of revised sections will be maintained in Auburn Environmental files.

1.4 When to Implement the CCP

This CCP should be implemented only if the incident is an emergency that could cause a potential hazard to human health or the environment. Should the incident be of a minor or controllable nature that presents no potential hazard, the Incident Commander (IC) will not implement this contingency plan. However, applicable procedures in this plan may be used to address incidents that do not require full plan implementation, but which require activities such as cleanup or decontamination.

Criteria for determining when the contingency plan will be implemented depend on the individual situation. The IC, or designee, is responsible for evaluating the situation and deciding whether to implement the plan.

The IC may implement this Comprehensive Contingency Plan under any of the following circumstances (and may or may not get input from the emergency response coordinator for environmental regarding the implementation of this plan):

- A fire, explosion, or unplanned release of dangerous or hazardous substances or oil to air, soil, receiving water, or groundwater that threatens human health or the environment.
- A fire onsite that may spread and could affect dangerous waste (as defined by the State of Washington Administrative Code) operations or areas containing hazardous materials.
- The possibility that fire protection water runoff could result in contamination of the environment or present a health hazard to employees or the public.
- A natural disaster that results in a hazardous release to air, water, or soil, or causes a fire or explosion resulting in any of the above circumstances.

2.0 SUPERFUND AMENDMENT AND REAUTHORIZATION ACT (SARA) TITLE III & OSHA HAZARDOUS WASTE OPERATIONS (HAZWOPER)

2.1 SARA Title III

This plan is coordinated with local emergency planning committees established pursuant to Title III of the 1986 Superfund Amendment and Reauthorization Act.

3.0 EMERGENCY RESPONSE ORGANIZATION ROLES AND RESPONSIBILITIES

3.1 Introduction

The procedures described in this plan are based on the Incident Command System (ICS). The Incident Commander (IC) is responsible for coordinating the response to an incident and carrying out the procedures of this contingency plan. The IC is the authority that determines which Boeingemergency response groups are activated to respond to an incident. The emergency response team organization chart for Auburn Site is presented in Figure 3-1 (page 3-13).

3.2 Incident Command System

Incident Commander: The senior on-duty Fire Supervisor at the location of the incident becomes the **Incident Commander** (**IC**), although the IC may change to anyone that has had incident command training. The IC is the primary person in charge of response to an emergency. The IC, with the support of the Emergency Response Coordinator for Environmental, is familiar with the contingency plan, Auburn Site operations, nature and location of potentially hazardous substances, site design and layout, and location of records. The IC, or a designated member of the emergency response team under the direction of the IC, is responsible for the safety of site employees, all Boeing response team members, and the public unless relieved by an outside emergency services IC.

The IC can be contacted by telephoning Security/Fire Dispatch, who will then contact the IC. The IC and/or alternate are on call 24 hours a day, 7 days a week. If the primary IC is unavailable, the alternate IC will be contacted to serve as the IC and will have the same authority and responsibility until the primary IC arrives on the scene.

The IC (or designee) directs response activities, including authorization to implement the contingency plan. Whenever there is an emergency involving the release of hazardous substances, dangerous waste or dangerous waste constituents at Auburn Site, the IC or designee is authorized to implement the contingency plan.

The IC is the interface between Boeing and outside emergency response services during an incident. The IC, with the support of the Emergency Response Coordinator for Environmental, is responsible for evaluating emergency situations involving a fire or explosion that may spread and could affect dangerous waste operations or areas containing hazardous materials, or unplanned release of dangerous or hazardous substances to air, soil, receiving water, or groundwater that threatens human health or the environment; or a natural disaster that results in a hazardous release to air, water, or soil.

Emergency Response Coordinator for Environmental (ERC): This individual is a member of the Environment, Health, and Safety (EHS) Organization. The Auburn Site Emergency Response Coordinator for Environmental (ERC) ensures timely and accurate notification to all applicable environmental organizations, internal and external to Auburn Site. The ERC is responsible for notifying all environmental regulatory agencies as required; ensuring that regulatory requirements are met; ensuring that the elements of this plan are implemented, and if not duly noting them for discussion at the end of the incident; coordinating outside equipment needs; and filing all required reports, internally and externally, upon completion of the incident. The ERC is familiar with all aspects of the Contingency Plan, all operations and activities at the facility, the location and properties of all wastes handled, the location of all records within the facility, and the facility layout. Additionally, the ERC has the authority to commit available Boeing Auburn site resources and will coordinate with the IC to ensure that the resources are expended to mitigate the incident quickly and efficiently.

(Note: The Emergency Response Coordinator for Environmental (ERC) mentioned in this document is not the same as the Emergency Preparedness (EmP) focal for Security.)

Safety Officer: The **Safety Officer** is responsible for overall employee safety. The Safety Officer may be appointed by the IC at the time of the incident. During an incident, the Safety Officer will evaluate the safety conditions and advise the IC accordingly. Also, the Safety Officer is the only party, with the exception of the IC, authorized to alter, suspend, or terminate response activities if the safety of an employee is in jeopardy, if an 'Immediately dangerous to Life or Health (IDLH)' condition exists and/or the situation involves an imminent danger. The Safety Officer assists the IC in ascertaining the health hazards associated with any materials that have entered the environment and advises the IC regarding necessary personal protective measures for response personnel.

Incident Notification: Whenever there is an imminent or actual emergency situation, the IC will notify the Security/Fire Dispatcher to immediately contact the Site Emergency Response Coordinator for Environmental. Additionally the IC will notify the Security/Fire Dispatcher or telephone-paging operators to communicate emergency instructions to Auburn Site personnel within Site buildings. A Checklist for the IC to use in the event of an incident is provided in Section 4.

The IC will direct that 911 be notified in the event that an emergency circumstance involving a hazardous substance, dangerous waste or dangerous waste constituent, including a fire, explosion, natural disaster, or release of dangerous waste or dangerous waste constituent to the air, soil, receiving water, or groundwater causes any of the following to occur:

- The material is beyond the control of the facility.

- The material has met or exceeded its' CERLA or SARA RQ (Reportable Quantity).

After notification of the emergency from the Security/Fire Dispatcher, the IC or designee will:

- Assemble the necessary emergency response team members.
- Establish a command post in a secure area.
- Delegate appropriate responsibilities to members of the emergency response team.
- Ensure the safety of all personnel.
- Direct all contingency plan activities from the command post.
- Coordinate the appropriate outside regulatory agencies or local emergency service providers.
- Take all reasonable measures necessary to ensure that the situation does not spread to other potentially hazardous areas.
- Assemble all necessary response resources to ensure timely and efficient control and mitigation of the incident.

Incident Response: Whenever there is a hazardous release, fire or explosion the IC, with support from the Emergency Response Coordinator for Environmental, will take the following measures:

- Immediately identify the character, source, amount, and extent of any released substances.
- Assess possible direct and indirect immediate and long-term hazards to human health and the environment that might result from the release.
- Assure that contact with outside regulatory agencies has been made, if necessary.
- Monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment (where applicable).

Additional actions taken by the IC in the event of a release or suspected release of *hazardous vapors* include:

- Implement emergency notifications and evacuation or shelter-in-place procedures.
- Take measures to help ensure the safety of employees in the vicinity.
- Control entry of personnel and vehicles into the area.

Immediately *after* an emergency, the IC (in coordination with the site Emergency Response Coordinator for Environmental) will implement the following post-incident activities:

- Transition the cleanup, storage, and disposal of material that result from a release, fire, or explosion on to Environment, Health, and Safety (EHS) and Facilities Acid Management (FAM).
- Ensure that any equipment and documentation that may be involved in an investigation is preserved until released by the investigation team.
- Make sure that emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
- Make sure that an incident critique is conducted evaluating the response activities and generating means for improvement.
- Providee any information required to the Emergency Response Coordinator for Environmental to ensure that all regulatory required written reports and notifications are completed.

3.3 Security and Fire Protection

Security and Fire Protection: Security and Fire Protection provide fire prevention, overall site control and work with FAM to coordinate response personnel. During an emergency incident Fire Protection, assisted by Security, is responsible for:

- Dispatching personnel and equipment to meet emergency conditions on company property.
- Verify evacuation of personnel from affected areas has occurred.
- Using all means and equipment available in rescuing personnel, extinguishing fires, and policing emergency conditions where company personnel are involved, .
- If necessary, dispatching equipment and personnel to public or non-Boeing private property in cases where Boeing has mutual aid agreements with municipal or county fire departments.
- Providing personnel trained as Hazardous Materials Technicians.
- Conducting search and rescue operations.
- Providing support along with EHS and FAM to assist in the control, containment, cleanup, and decontamination phases of the incident.

The control procedures implemented in the event of an emergency circumstance involving a hazardous substance, dangerous waste or dangerous waste constituent depend on the type of incident and the magnitude of the problem. If the incident involves a fire or a release of hazardous substances, dangerous waste or dangerous waste constituents appears to be spreading out of control, the IC and Emergency Personnel respond immediately to:

- Ensure the safety of employees in the near vicinity.
- Control entry of personnel and vehicles into the area.
- Implement emergency notification or evacuation procedures.

Boeing Fire Protection serves as the primary response authority in emergency situations at Auburn Site. In the event of an emergency at Auburn Site, Valley Regional Fire Authority is the authority having jurisdiction over the incident.

All information released to the public pertaining to emergencies and accidents involving Auburn Site must be approved by the BCA Fabrication Communications Office or if necessary the Corporate Public Relations Office.

Security and Fire Emergency Dispatch: The Emergency Dispatcher is typically the first person notified in an emergency. The Dispatcher is the delegated "site focal point" for receiving the initial verbal reports and communication pertaining to emergency response operations. The Emergency Dispatcher will:

- Notify the designated IC or alternate.
- Notify the Site Emergency Response Coordinator for Environmental, FAM, EHS, Manufacturing Management and Boeing Medical.
- Remain available to further assist the IC by making telephone contacts as requested.
- Receive from the IC any information to be broadcast over the master paging system.
- Notify the local jurisdiction if criteria for notification have been met (See section 3-2 for criteria).

Fire Supervisor: The most senior Fire Supervisor on-duty at the time of the incident is the IC.

3.4 Auburn Facilities Assset Management, Equipment Services, and Equipment Maintenance (FAM))

Auburn FAM has primary responsibility, under the direction of the IC, for controlling, containing and cleaning up a release and/or spill. Resources are

available for emergency response 24 hours a day. During a hazardous material (Hazmat) incident FAM is responsible for:

- Providing crafts personnel trained as Hazardous Materials Technicians. This may include, but not be limited to, Plumbers, Electricians, Motive Equipment Operators (MEOs), Heat and Vent workers, Environmental Control Workers, Wastewater Pretreatment Operators and Production Equipment Services Personnel.
- Assembling the personnel and resources, with assistance from Boeing Fire and EHS, to support the control, containment, cleanup, and decontamination phases of the incident.
- Notify and coordinate emergency clean-up service providers.

FAM, along with Boeing Fire and EHS, maintain emergency response materials for the containment and cleanup of hazardous substance releases. A fire department vehicle specially equipped for release response is on standby at the 17-16 building. Equipment and supplies are typically maintained in transportable, weatherproof containers. Also, FAM provides, if needed, portable lighting to illuminate the release area and release clean-up activities.

If the spill cleanup involves recovery work beyond the site property line, or requires more sophisticated equipment and additional staffing not available within the Auburn Site,the ERC, or environmental or FAM representatives will procure the services of a professional site cleanup contractor via the emergency contract.

Note: *If a generator with a cumulative engine maximum horsepower of 500 or above will be used to provide electrical power during an emergency, Boeing Auburn shall notify the Puget Sound Clean Air Agency (PSCAA) in advance. Generators with cumulative engine maximum hp above 500 and below 2,000 require notice only; generators that are 2,000 hp or above require advance notice and pre-approval. The project manager initially shall supply EHS with date of equipment arrival on site, if applicable, and the cumulative maximum engine horsepower. At the conclusion of generator use, the project manager shall supply EHS with the equipment departure date (if applicable), the purpose for which the equipment was used, equipment manufacturer, model number, and its unique serial number, engine model year, type of fuel used with fuel specifications (sulfur content, cetane number, etc.). Run time, if available, will also be provided to EHS.*

In addition to hazardous substance releases, FAM, along with Environmental, is responsible for conducting routine monitoring activities, inspections, and maintenance on equipment associated with the management of hazardous substances operations at the Auburn Site. FAM will provide employees to properly manage hazardous substances.

3.5 Hazardous Materials Response Team (Hazmat Team)

The Auburn Hazmat Team, which consists of Hazmat technicians certified per 29 CFR 1910.120, and is located at the Auburn Site will respond to an incident upon request by either the Boeing Incident Commander or the City of Auburn Incident Commander. The Hazmat Team is trained to manage and control actual and/or potential leaks or spills of hazardous substances requiring close approach to the substance. Typically, the Hazmat Team is made up of members from the following organizations:

- FAM
- Equipment Services
- Security and Fire Protection
- EHS

The Hazmat Team is also supported, as necessary, byoff-site EHS teams, Boeing Medical, BCA Communications, and other Auburn site teams.

The function of the Hazmat Team is to:

- Assess the nature and the potential hazard of the release.
- Stop, control, or contain the release of hazardous substances.
- Clean up hazardous substances after the release is controlled.
- Decontaminate the area and equipment.
- In coordination with EHS and Environmental, neutralize, package, label, mark, manifest, store, and arrange for transportation and disposal of hazardous wastes generated by the release.

Incident Response: The Auburn Site Hazmat Team responds to an incident at the request of the IC. The Hazmat Team will respond to the release of materials at the Auburn Site under any one of the following conditions:

- The IC has requested the team, which is usually because:
  - The release has exceeded the size of an incidental spill (i.e. – cannot be cleaned up by the person that created it).
  - The release has exceeded its reportable quantity (RQ).
  - The release is of unknown material.

The control or spill mitigation procedures implemented by the Hazmat Team in the event of a fire, explosion, or release depend on the type of incident and the magnitude of the problem presented by the incident. In general, the responsibilities of the Hazmat Team include the following:

- Evacuate, isolate and secure the affected spill area.
- Don personal protective equipment (clothing and SCBA protection), as directed by the IC, to enter the contaminated zone.
- Conduct sampling, if required, for testing and identification of the released substance.
- Attempt to locate the source of the release, and stabilize or contain the release to the extent possible. This may be accomplished by elevating punctures in containers above the liquid levels, plugging leaking tanks, turning off pumps, closing valves, or placing covers over storm and sanitary sewer openings in the immediate vicinity to minimize the potential for the release to enter these systems.
- Construct temporary dams and diversion structures to contain the release.
- Contain or clean up small liquid spills by means of absorbent pads, booms or other absorbent materials.
- Transfer hazardous materials or waste from a damaged container (in a poor or deteriorated condition or leaking) to an over-pack container.
- Use portable pumping equipment or a wet vacuum to pump spilled material into tanks or containers compatible with the spilled material (with EHS approval). Portable vacuum tankers are available to the Hazmat Team for this procedure.
- Properly label, package, mark, and dispose of hazardous waste generated by an emergency incident, in consultation with EHS and Environmental.

Release to Storm Drains or Sanitary Sewers: If a release cannot be contained within the immediate spill area and it enters a storm or sanitary sewer system through catch basins, manholes, or other drains, Hazmat members must determine the quantity and direction of flow and attempt to intercept and stop the flow downstream per the Auburn Site stormwater permit WAR000221 when reasonably possible. FAM and EHS maintain master drawings of storm and sanitary sewer systems at Auburn Site, which can be used by the Hazmat Team in locating sewers, connections, valves, and manholes. The Hazmat Team may remove spilled materials by bailing, pumping, or the use of absorbent materials. They may use absorbent booms to contain or restrict the downstream flow of the release.

If a release cannot be intercepted and recovered upstream from a storm sewer outfall, the Hazmat Team will transport spill control equipment and staff resources to the appropriate storm sewer outfall and recover as much of the release as possible. If the cleanup involves; recovery work beyond the Boeing

property line, more sophisticated Hazmat response equipment, or additional staff resources not available within the Boeing Company, the Site Emergency Response Coordinator for Environmental will contract the services of a professional outside commercial emergency response cleanup team.

In the event that a release to a storm drain cannot be contained prior to the outfall, is not promptly cleaned out, or the material released is not compatible with the conditions of the storm drain the site ERC or site stormwater focal will notify the Washington State Department of Ecology. The site ERC or site stormwater focal will use best professional judgment to determine if the release to the storm drain requires notification to Ecology. Additionally, in the event that a release to a sanitary sewer threatens human health or the environment the site ERC or site industrial wastewater focal will notify Ecology and the King County Department of Natural Resources (KCDNR).

Post-Incident Follow-Up: Once conditions at the incident are stabilized and under control, long-term cleanup situations can sometimes be categorized under WISHA post-emergency response criteria. Some releases or spills may involve post-emergency response cleanup activities. Post-emergency response is that portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun.

If members of the initial response conduct the post-emergency response activities no additional training is required. However, if individuals not part of the initial response efforts conduct post-emergency response activities those employees must meet the requirements of WAC 296-824.

3.6 Environment, Health, and Safety (EHS)

The Environment, Health, and Safety (EHS) group that supports Auburn is made up of two different organizations: Health and Safety, and Environmental/Chemical Process Management (CPM).

3.6.1 Environmental

Environmental assists the Hazmat Team in determining the extent, flow patterns, and effects of spills (including control, countermeasures, and cleanup procedures). Environmental provides 24-hour support, although Environmental is not available on site 24 hours per day. Environmental is responsible for procedures and methods of disposal of wastes, restoring the spill area to its original condition, and completing the required post-emergency notifications and reports.

Environmental has the authority and responsibility to notify regulatory agencies within the time periods required by environmental regulations and permits. The Site Emergency Response Coordinator for Environmental, a representative of

Environmental, has the authority to commit available Auburn Site, Fabrication, and company resources needed to carry out this plan and will coordinate with the IC to ensure that the resources are expended to mitigate the incident quickly and efficiently.

Environmental will typically ask the spill area or organizationmanagement to submit a spill incident report form. The report is submitted on the IRS+ system, and is distributed throughout the site. Environmental prepares and submits spill reports to all regulatory authorities as required and provides information concerning spills according to the distribution on the report form.

During a Hazmat incident Environmental will be responsible for:

- Providing the Emergency Response Coordinator for Environmental who will coordinate with the IC to ensure that the incident is mitigated quickly and efficiently.
- Providing one or more person who is trained as a Hazardous Materials Technician.
- Approving procedures and methods of management and disposal of wastes.
- Providing analytical support for the identification of the spilled/released material.
- Determine the designation of wastes generated by the incident.
- Ensuring that the site is returned to its original state.
- Assist in identification of hazardous substances, dangerous waste or dangerous waste constituents released.
- Prepare and process manifest documents involved in shipping and disposing of the spill material, absorbents, and other wastes related to the cleanup.

Notify and coordinate with the appropriate outside regulatory agencies. ➢ Assist the Hazmat Team in ascertaining the health and environmental hazards associated with the spilled material.

- Commit available Auburn Site, Fabrication, and company resources as required to mitigate the incident and return the scene to its pre-incident state. A copy of the signed Fabrication authorization to commit resources in an emergency page is found in Section 10.

3.6.2 Health and Safety

During a Hazmat incident Health and Safety is responsible for assessing hazardous and unsafe situations while developing measures for assuring

personnel safety. Health and Safety provides support 24 hours a day. Health and Safety will provide technical support, chemical knowledge and an Industrial Hygienist during an incident.

During a Hazmat incident Health and Safety will be responsible for:

- Providing an Industrial Hygienist to the incident, when requested.
- Assisting the IC in ascertaining the health hazards associated with the spilled material.
- Advising the IC of appropriate protective measures for response personnel.
- Selecting monitoring equipment and instructing entry team personnel in the equipment's use.
- Determining clearance for safe re-entry of an evacuated area.
- Notify and coordinate with local emergency clean-up service providers.
    - Notify the State Department of Occupational Safety and Health (DOSH) office within 8 hours of hospitalization of one or more employees, or any fatality.
- Assist the Hazmat Team in ascertaining the health and environmental hazards associated with the spilled material.
- Determine personal protective measures for personnel directly involved in spill material cleanup.

3.7 Boeing Medical / Fire Department EMTs

The Security/Fire Dispatcher will contact Boeing Medical, as appropriate. The responsibilities of Boeing Medical may include:

- Providing emergency treatment to Boeing employees
- Providing on-site medical support to the Hazmat Team.
- In conjunction with Boeing Fire, monitoring the vitals of entry personnel.
- Establishing a Rehabilitation station.
- Setting up and controlling any treatment, if needed.

In cases where an injured employee needs further medical attention, either the Boeing Fire Department, Agency having Jurisdiction (AHJ), or private ambulance services are used to transport individuals to local hospitals.

3.8 Communications

The role of Communications is to approve and release Boeing information to employees, the news media, and the public.

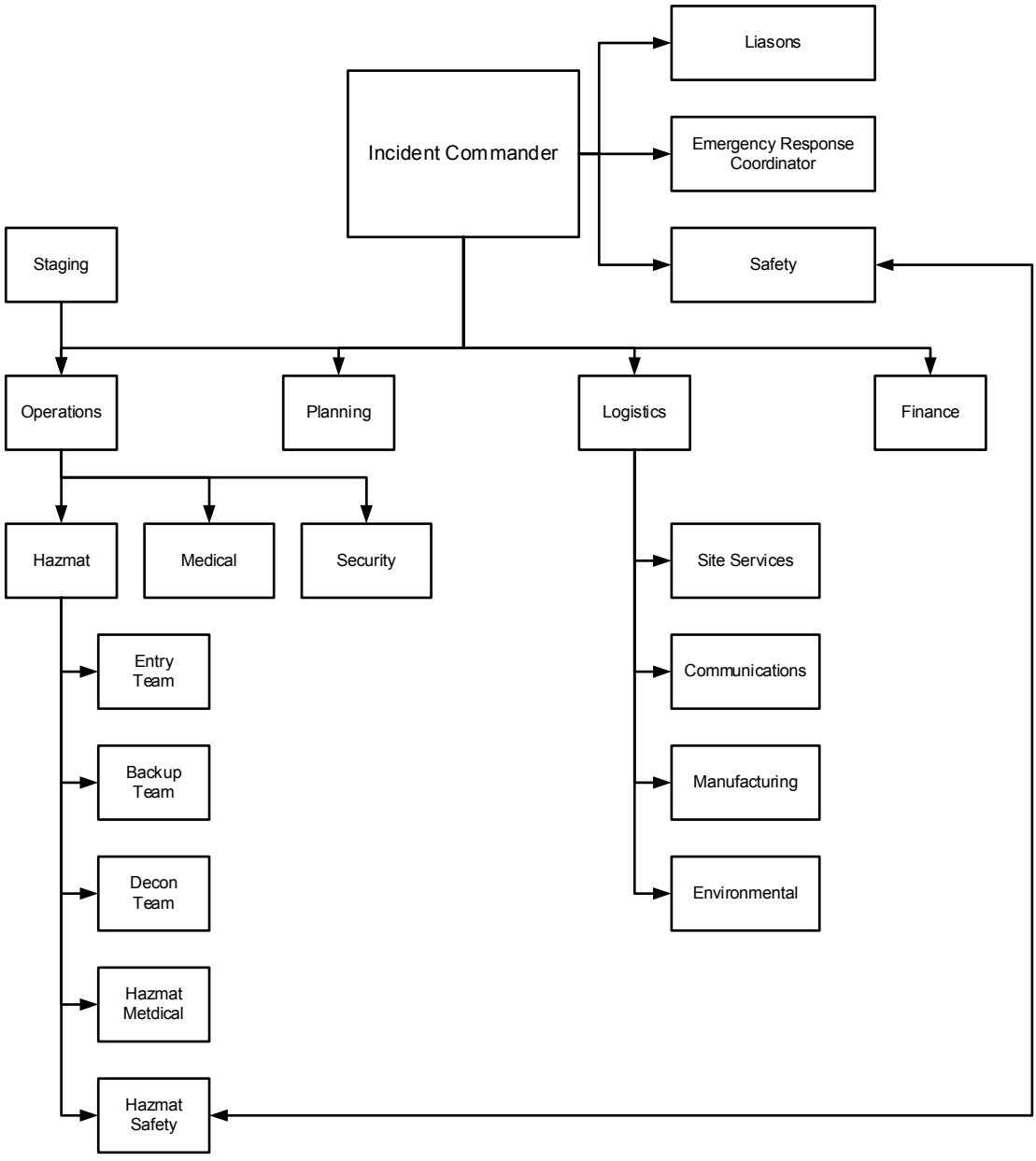
In coordination with the IC, Environmental, FAM, and MBU Management, the Communications senior manager will serve as, or designate a spokesperson to be the **Public Information Officer (PIO)**. The PIO will talk to the media and coordinate a news conference, if one is necessary. ***None*** of Boeing's internal emergency response personnel are authorized to release information pertaining to emergencies and accidents to the public or media unless approved by the Communications Office. All information must be approved and released through the Communications Office, or if necessary the Corporate Public Relations Office.

The Communications senior manager and the Communications management staff are on call at all times and should be notified immediately in the event of an emergency incident involving Auburn site employees or property. Typically, the IC or the Security/Fire Dispatcher contacts the Communications senior manager. The senior manager will serve as or designate a PIO who is responsible for:

- Working with the IC, Security/Fire Dispatcher and the site ERC to gather and regularly update information and facts concerning an incident.
- Organizing and coordinating appropriate levels of response from the Communications staff.
- Contacting BCA Communications Vice President (VP); Director of Executive Communications; Director of Airplane Production Communications; BCA Communications Duty Officer; Company Offices Public Relations; Government Affairs; and BCA Group Office Public Relations.
- Developing the official Company statement and disseminating all information to employees, the news media and the public.
- Coordinating meetings between the media and response personnel.
- Working with the IC to coordinate media briefings.

All questions from any outside source to other employees are referred to the PIO. The PIO should be kept apprised of all developments during and after an incident.

Figure 3-1



4.0 Emergency Response Situations

This section describes response procedures for responding to Emergency Response Situations. It contains action and communication flow charts, a brief explanation of personnel roles and responsibilities, references for site-specific information lists (chemical list, equipment list, and phone directory), and an IC checklist. The four most likely emergency response situations include:

- Hazardous Release
- Fire/Explosion
- Medical Emergency
- Natural Disaster

In some situations, there will be some differences in responding to each of the emergency response situations. In those cases, the differences will be noted.

Natural disasters do not of themselves constitute a basis for implementing the contingency plan. However, if a natural disaster results in the release of toxic materials to air, water, or soil, or causes a fire or explosion or health threat resulting in any of the above circumstances, the IC will implement this plan.

4.1 Action/Communication Flow Charts

The flow charts in this section depict internal procedures to be used in the event of an emergency response, and provide Boeing personnel with guidance in implementing emergency response procedures. The flow charts include:

Figure 4-1

EMPLOYEE INSTRUCTIONS
EMERGENCY RESPONSE

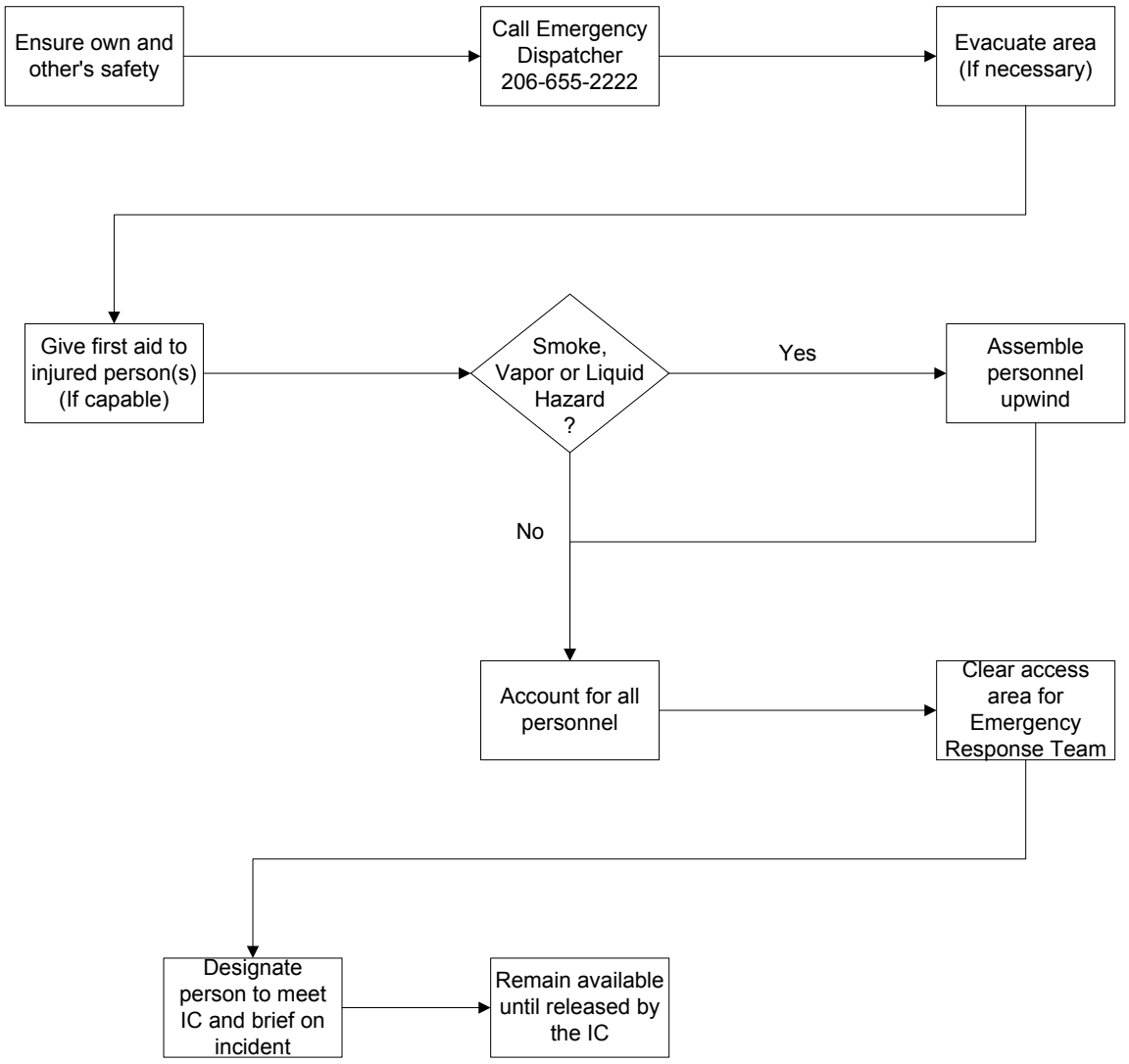


Figure 4-2

EMERGENCY DISPATCHER INSTRUCTIONS
EMERGENCY RESPONSE

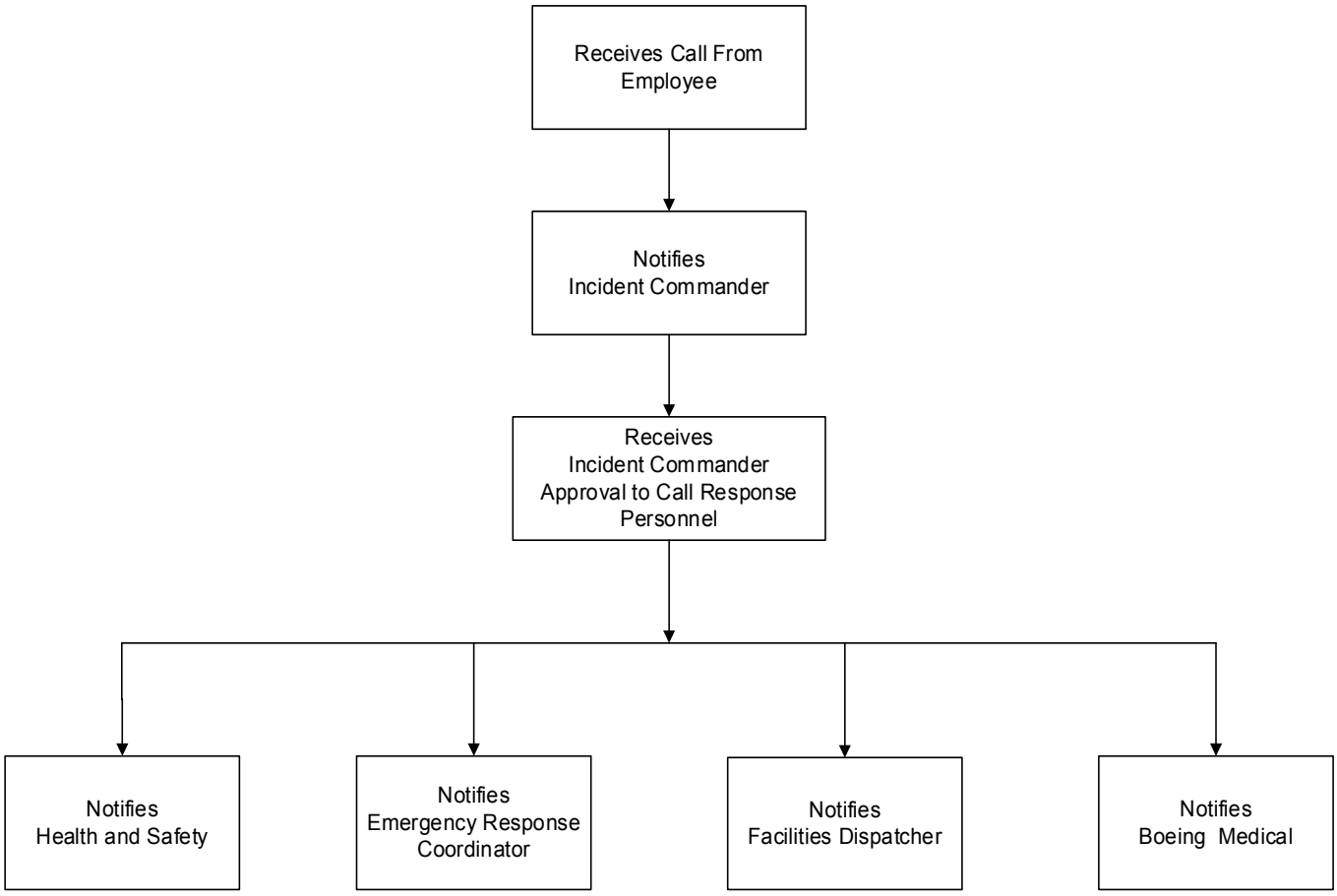


Figure 4-3

INCIDENT COMMANDER INSTRUCTIONS
EMERGENCY RESPONSE

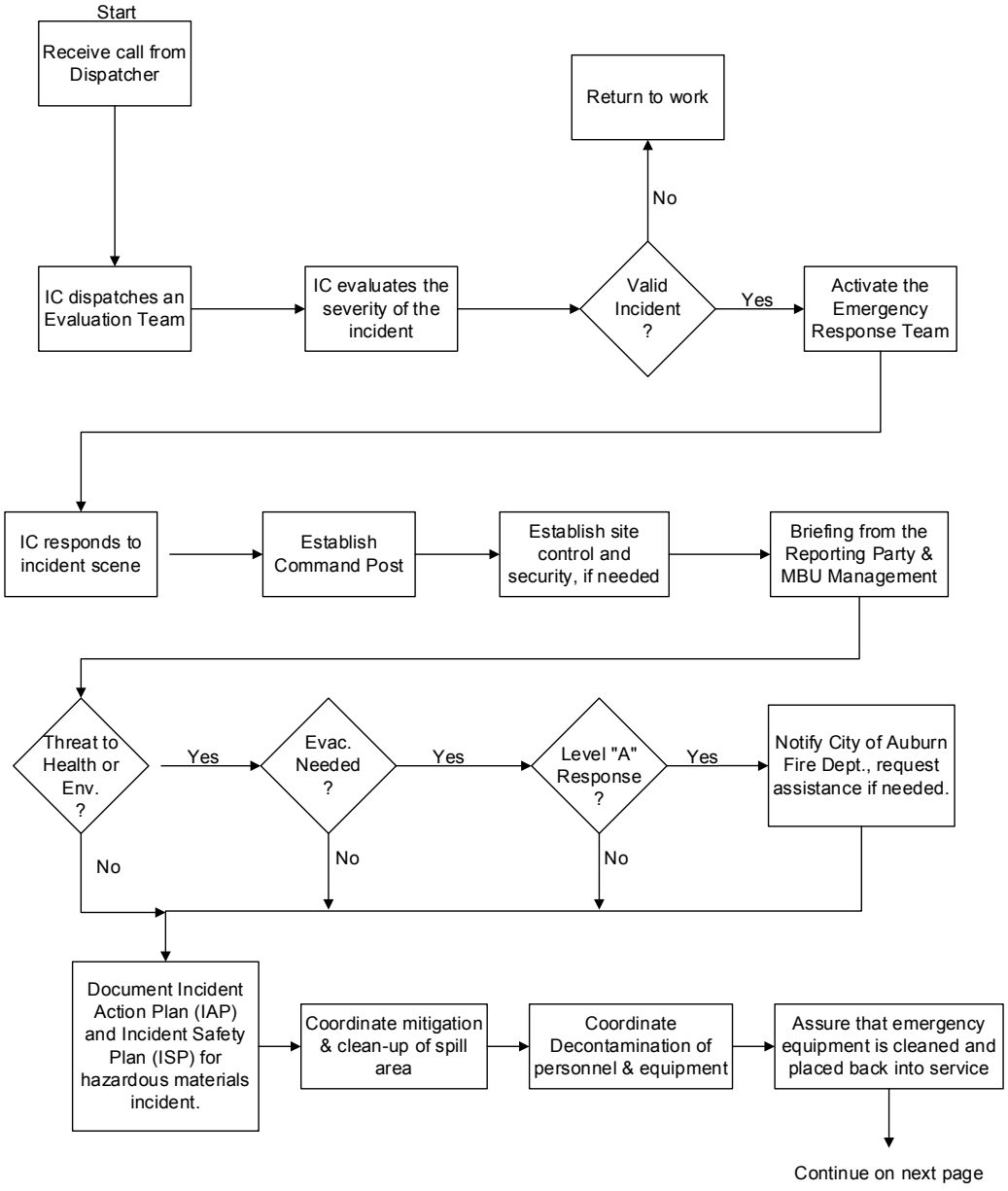


FIGURE 4-3 (Cont'd)
INCIDENT COMMANDER INSTRUCTIONS
EMERGENCY RESPONSE

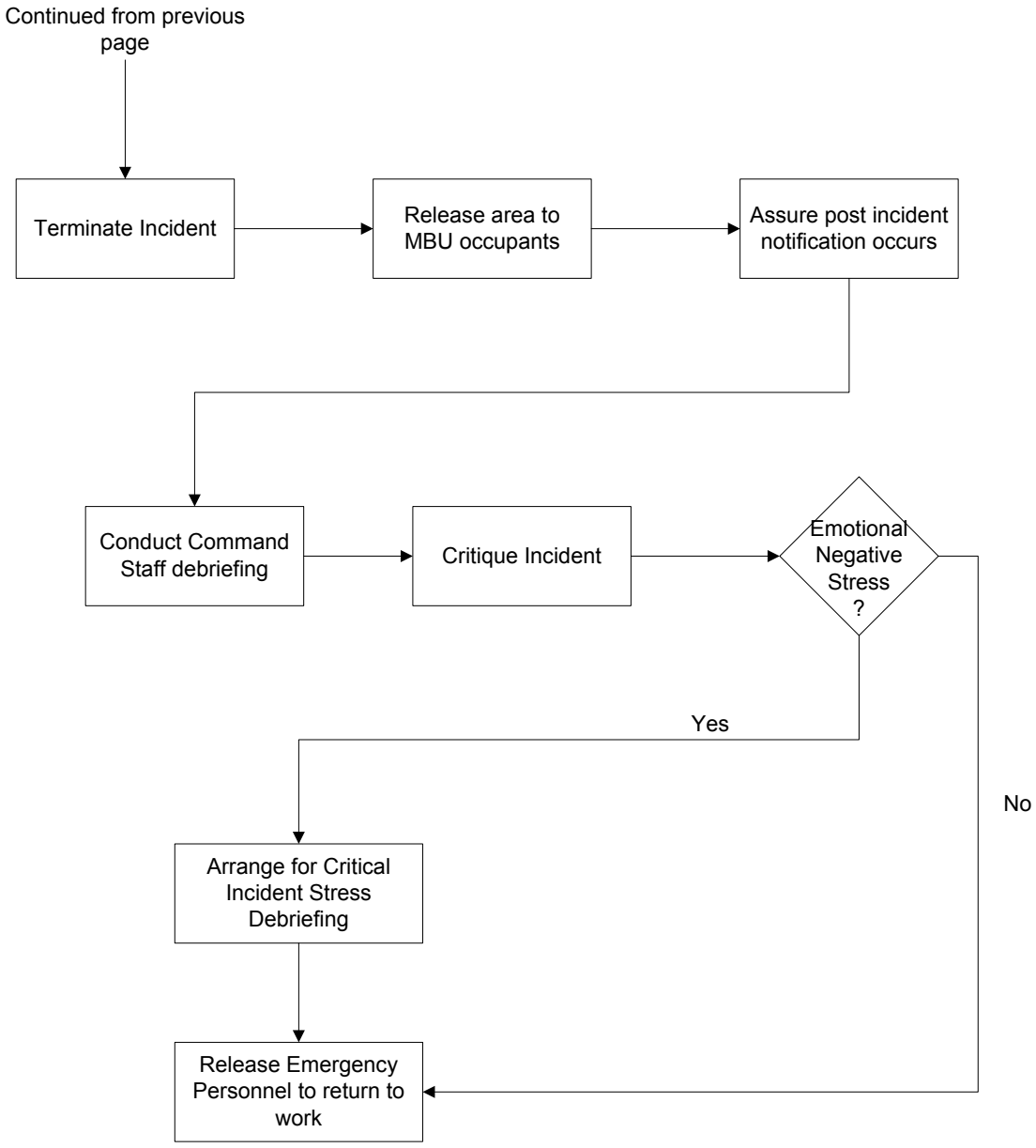


Figure 4-4

EMERGENCY RESPONSE COORDINATOR INSTRUCTIONS
EMERGENCY RESPONSE

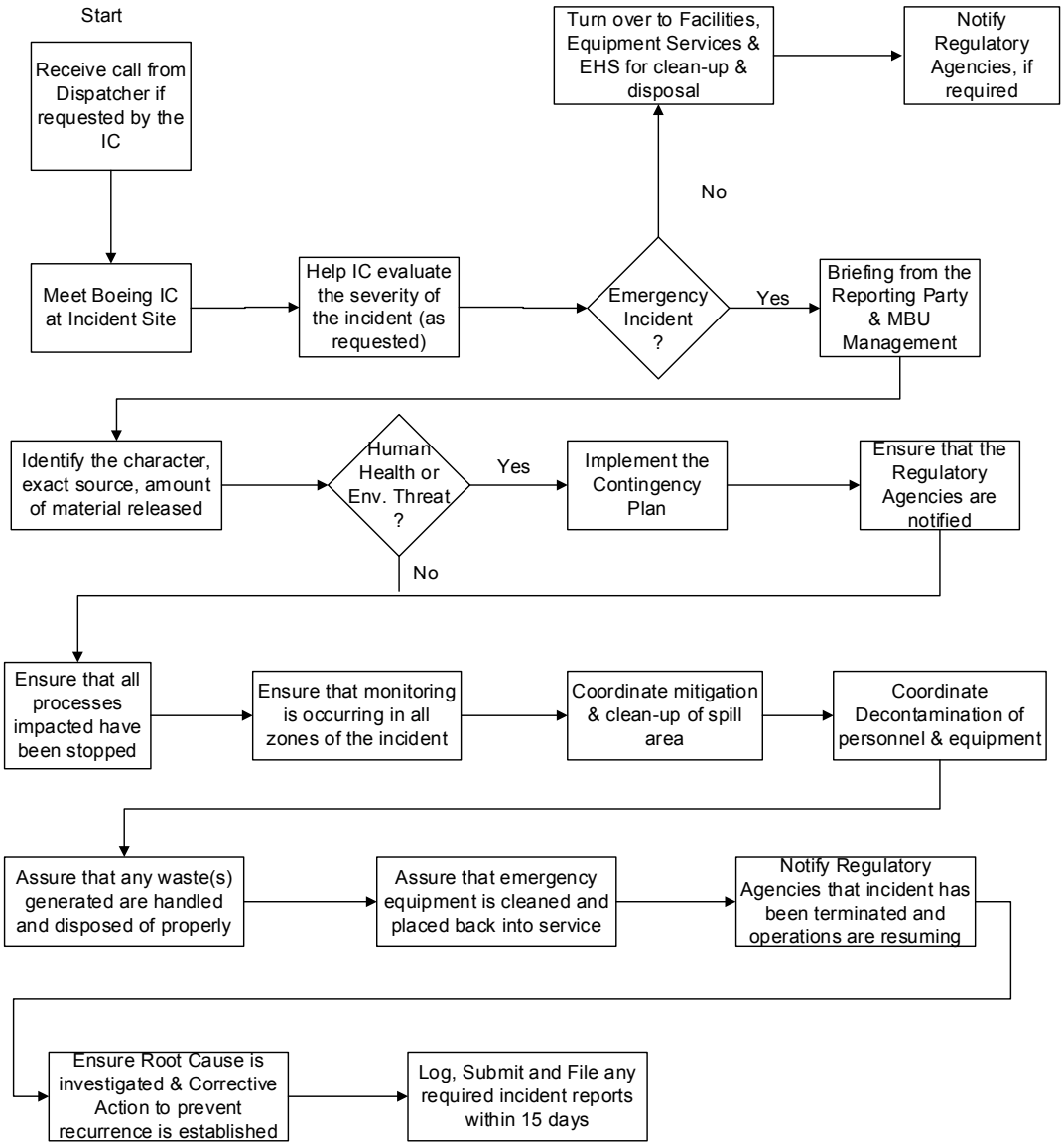


Figure 4-5

HAZMAT TEAM INSTRUCTIONS
EMERGENCY RESPONSE

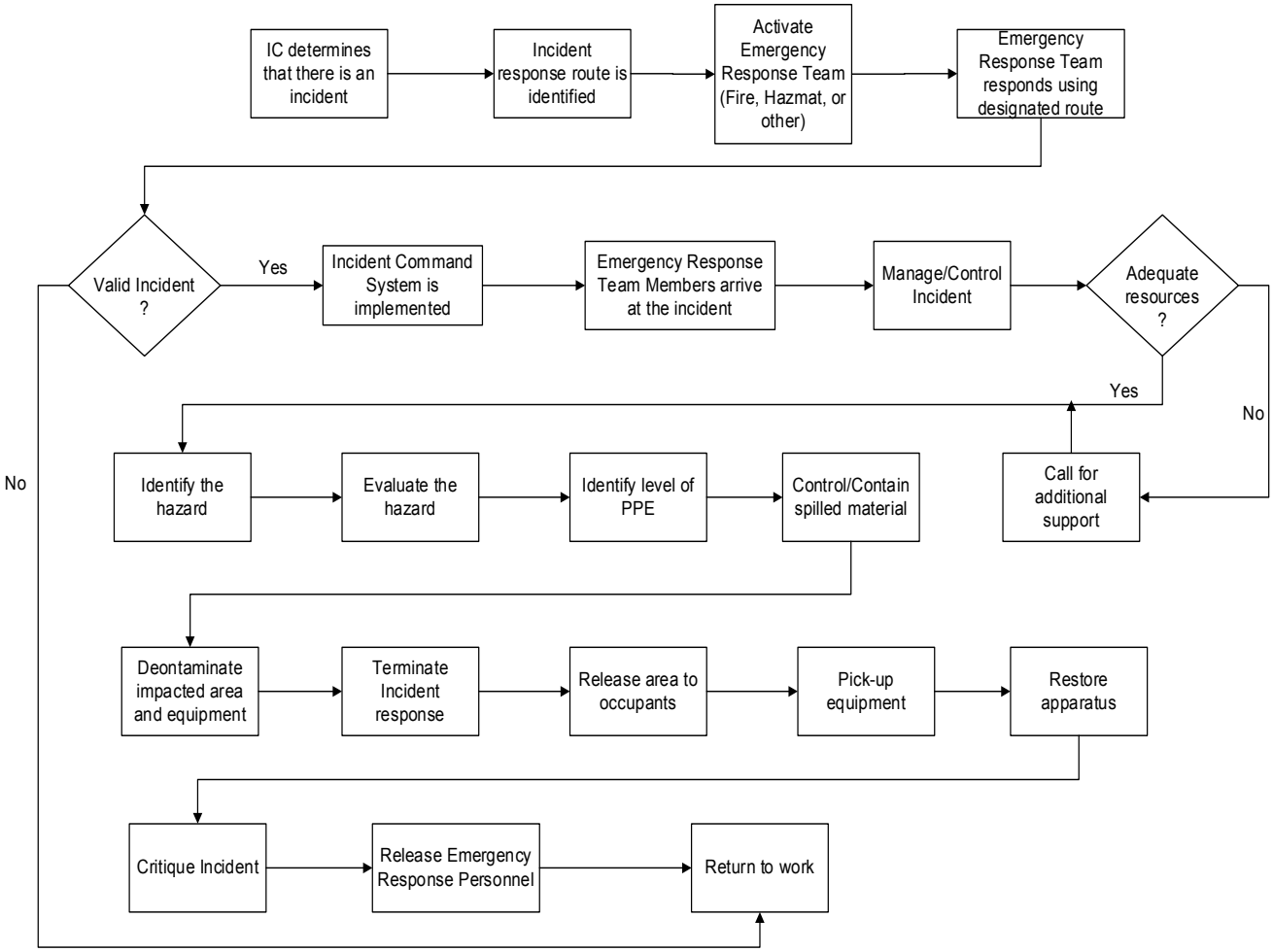
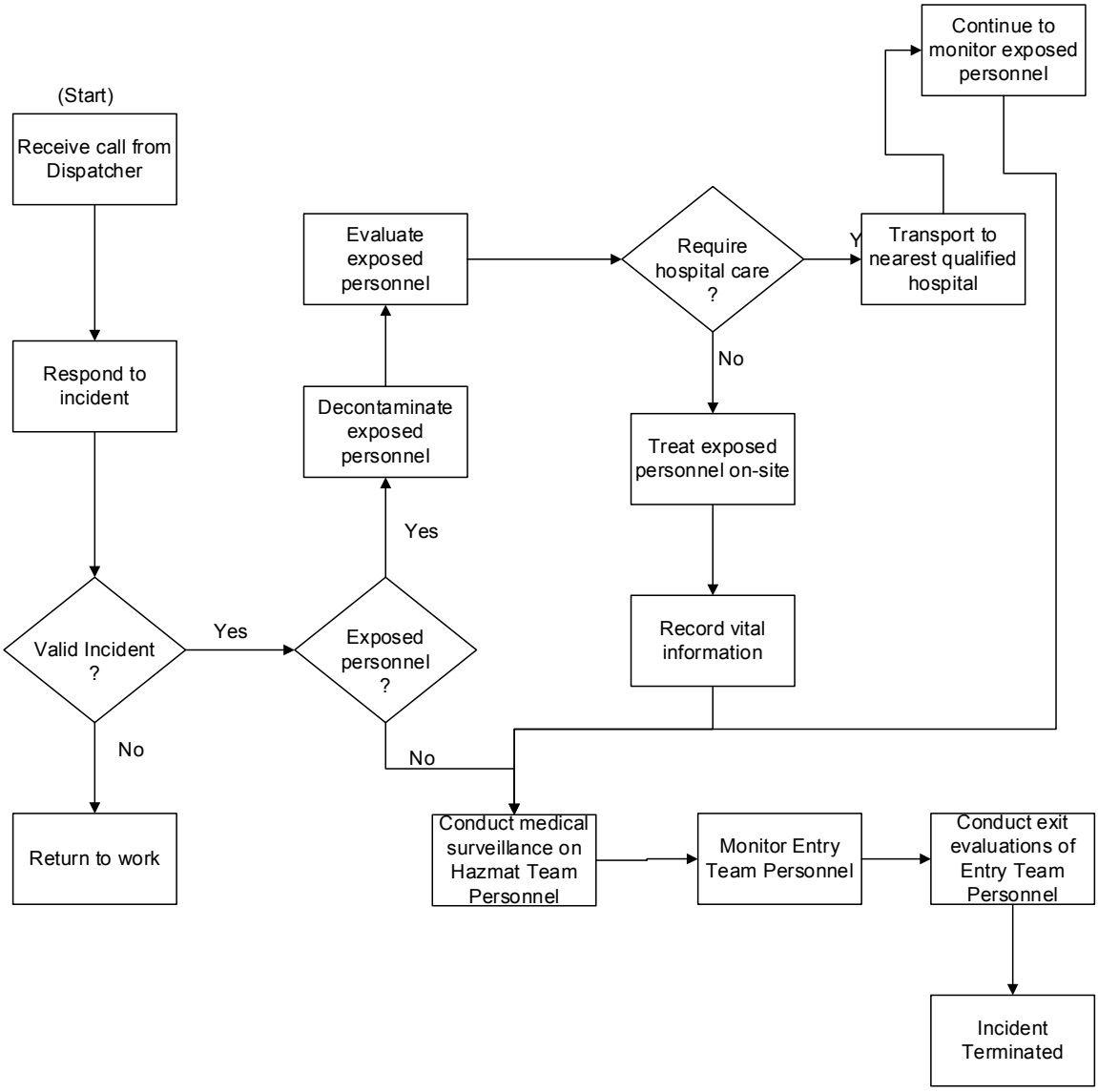


Figure 4-6

MEDICAL TEAM INSTRUCTIONS
Note: This may include the Boeing or outside EMTs, the Auburn Site Hazmat Team, or the Auburn Medical facility and employees.
EMERGENCY RESPONSE



4.2 Support Personnel for Incident

In case of an emergency response, the following internal groups will provide emergency response support.

- **Security/Fire Department**
  - Please see section 3.3 for security/Fire Department tasks.
- **Auburn FAM**
  - Please see section 3.4 for Auburn FAM tasks.
- **Hazmat Team**
  - Please see section 3.5 for Hazmat Team tasks.
- **EHS**
  - Please see section 3.6 for EHS tasks.
- **Boeing Medical**
  - Please see section 3.7 for Medical tasks.
- **Communications**
  - Please see section 3.8 for Communications tasks.

4.3 Chemical and Equipment Lists

Information on the chemicals used within Auburn Site is located in Section 11 of this document. A complete list of the emergency response equipment available to Auburn Site is located in Section 12 of this document. Where possible, site specific information is summarized in Tables 12-1 and 12-2 for use in the event of an emergency.

4.4 Incident Telephone Directory

The telephone directory provided in Section 13 lists the telephone numbers necessary in the event of an emergency. The directory includes:

Incident Support Personnel **Table 13-1**

This directory provides on-scene personnel with the telephone numbers to reach primary and secondary ICs for any given shift; the 24/7 Emergency Response Coordinator for Environmental and backup personnel; and, the appropriate Boeing support personnel for addressing an emergency.

Offsite Emergency Contacts **Table 13-2**

This directory provides the IC and the Site Emergency Response Coordinator for Environmental with the telephone numbers to reach the appropriate off-site contractors and regulatory agencies necessary for assistance and verbal reporting/notification.

4.5 Incident Commander Checklist
(WAC 173-303-360)

In the event of an emergency situation, the incident commander (or designee) must ***immediately:***

☐ Activate internal facility alarms or communications where applicable, to notify facility personnel.

☐ Call appropriate off-site emergency contacts if their help is needed.

Next, you should:

☐ Identify the cause of the emergency.

☐ Identify the exact source of the emergency.

☐ Identify the extent of the emergency.

☐ Assess hazards to human health

☐ Assess hazards to the environment

☐ Identify the amount of the release, if possible.

☐ Identify the character of the release, if applicable.

☐ Assess the need to evacuate

☐ Assessment report requirements.

Name of reporter _____

Telephone of reporter _____

Name of facility _____

Address of facility _____

_____

Time of incident _____

Type of incident _____

Name of materials(s) involved _____

_____

Quantity of material(s) involved _____

Extent of injuries _____

Hazards to human health (outside facility) _____

Hazards to environment (outside facility) _____

If emergency threatens human health or environment immediately:

- ☐ Notify appropriate regulatory agencies of the nature of the incident and report.
- ☐ Aid officials to decide if local community/facility should be evacuated.

Otherwise:

- ☐ Stop processes and operations where applicable.
- ☐ Assume control of incident.
- ☐ Collect and contain released waste.
- ☐ Remove or isolate waste containers.
- ☐ Monitor for leaks; pressure buildup; gas generation; ruptures in valves, pipes, or other equipment.
- ☐ Provide for treating, storing, or disposing of recovered waste.
- ☐ Ensure waste not compatible with released material is not treated, stored, or disposed of before cleanup is completed.
- ☐ Clean emergency equipment and ensure it is fit before operations are resumed.
- ☐ Notify Ecology and local regulatory agencies that the facility meets the criteria in the two previous boxes [WAC 173-303-360(2)(i)].
- ☐ Note in operating record: time, date, and incident details that initiated CCP.
- ☐ Submit written report to Ecology within 15 days of incident.
- ☐ Submit other reports as defined in the CCP Reporting Section.

Evacuation Procedures:

- ☐ Contact dispatcher to dispatch security and fire protection.
- ☐ Determine gates to be used, depending on their respect to location, wind direction and personnel occupancy.
- ☐ Broadcast evacuation directions through site telephone paging system. Evacuation directions at the incident location may be transmitted by security/fire vehicle public address system or portable loudspeakers or by word of mouth.
- ☐ Direct personnel, visitors and contractors to leave through designated gates.
- ☐ Regroup personnel to IC-specified areas during evacuation instructions.
- ☐ Supervisors account for their personnel and report any absence to the IC.
- ☐ Direct and coordinate all attempts to rescue or find missing persons.

5.0 MAPS

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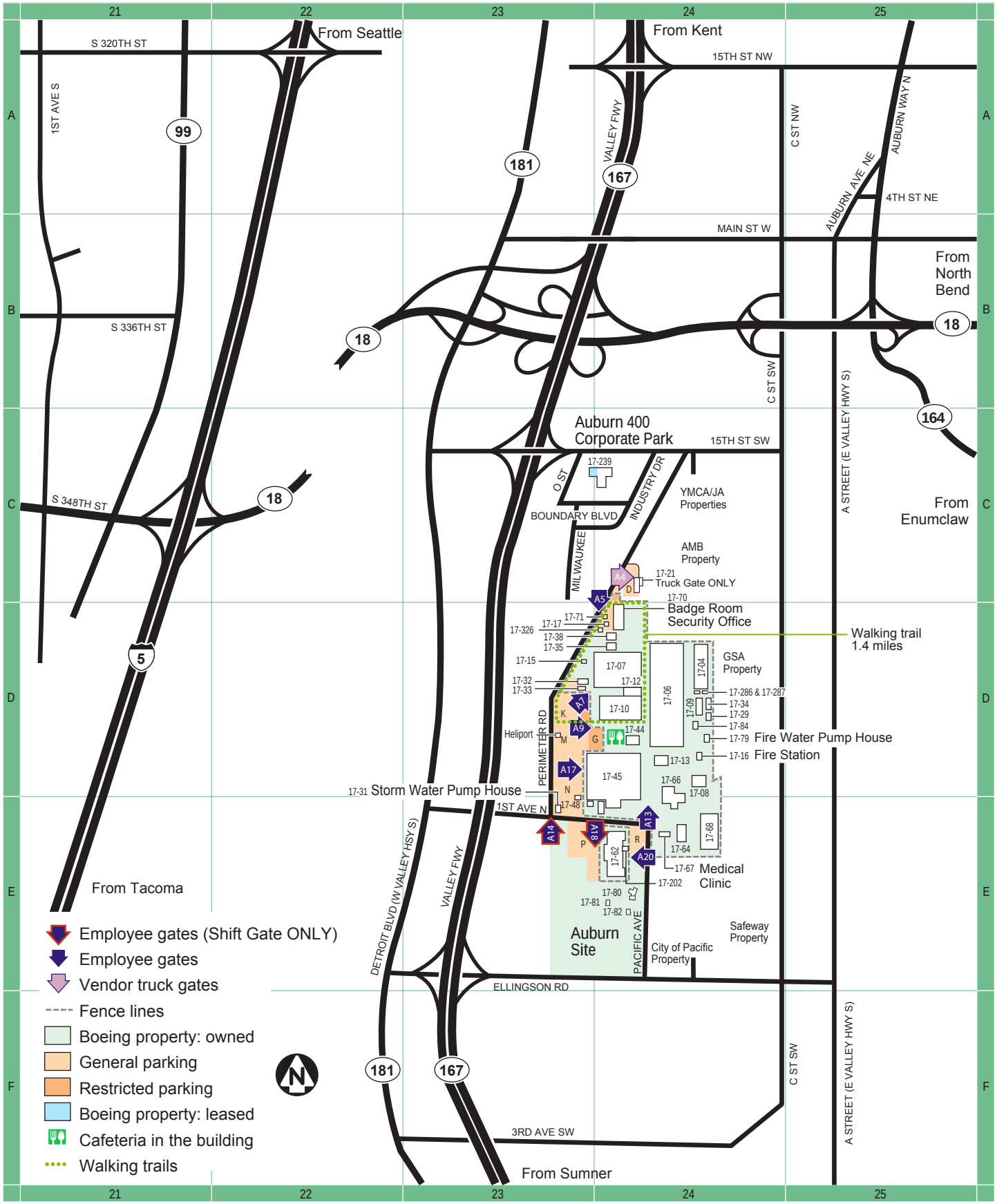
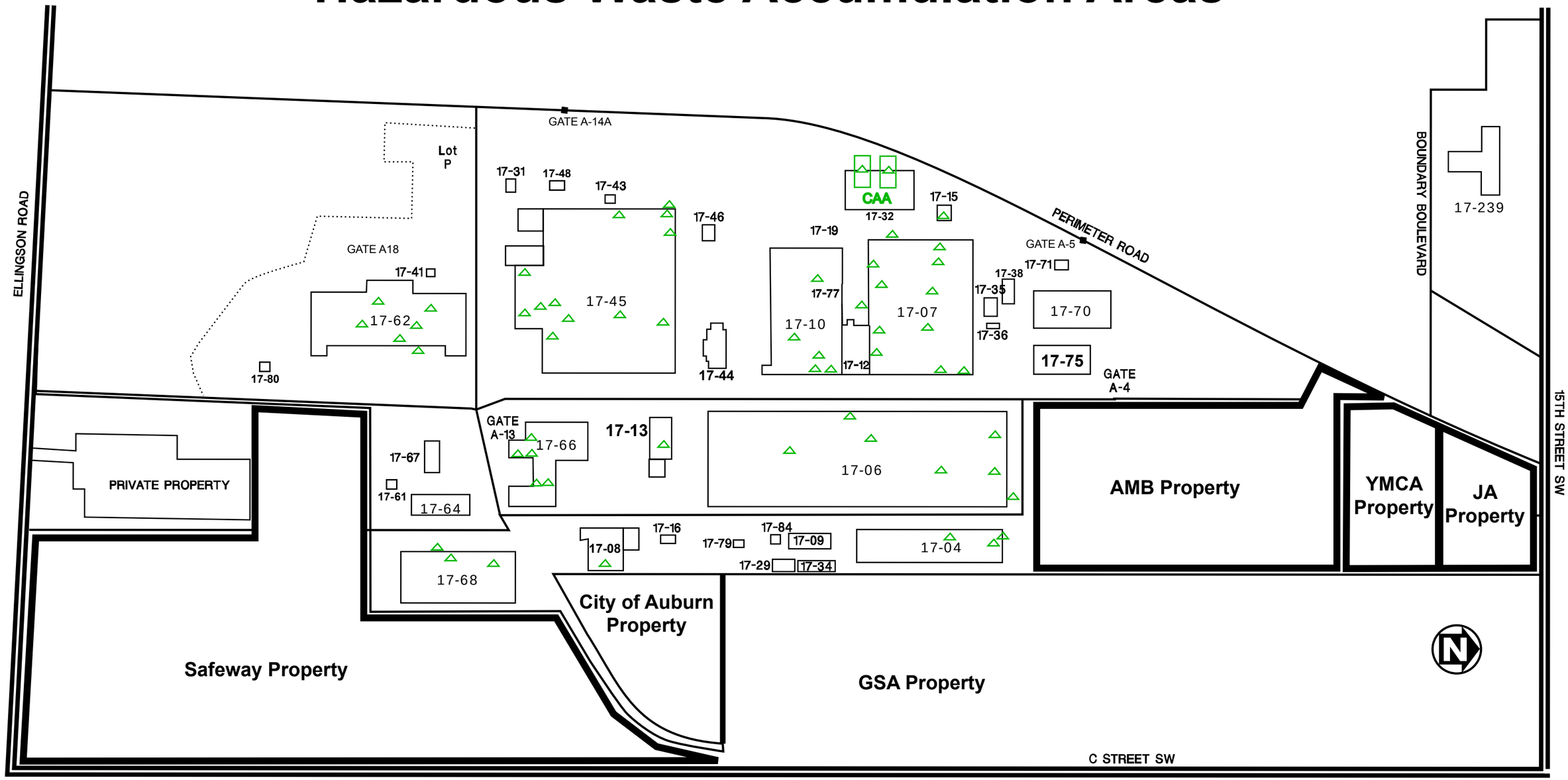
Washington – Auburn

2400 Perimeter Road SW, Auburn, WA 98001 (site address)
700 15th Street SW, Auburn, WA 98001 (truck gate)



Revised 10-02-2015

Auburn Site
Hazardous Waste Accumulation Areas

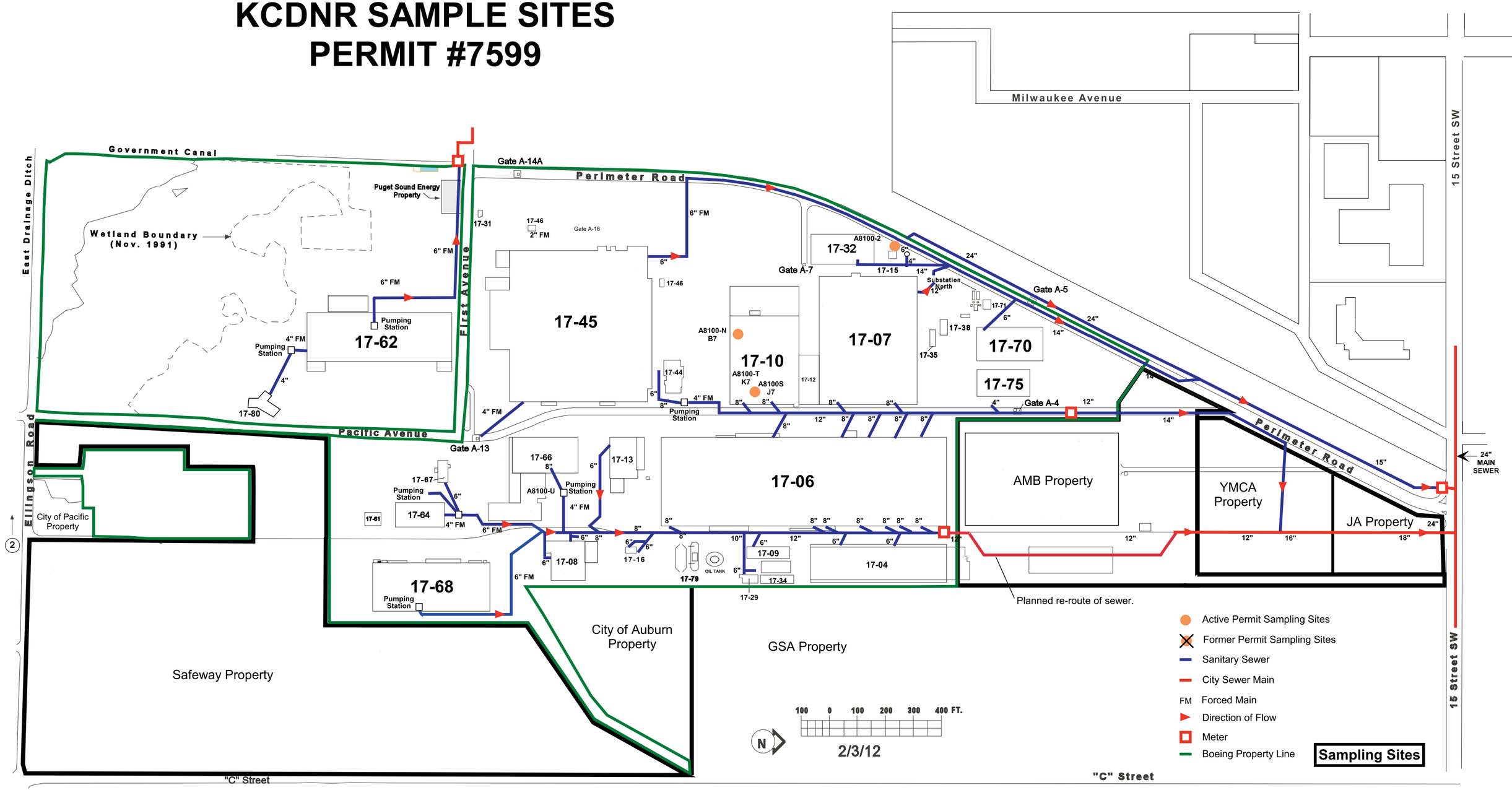


17-32 Central Hazardous Waste Accumulation Area

△ Hazardous Waste Accumulation Area

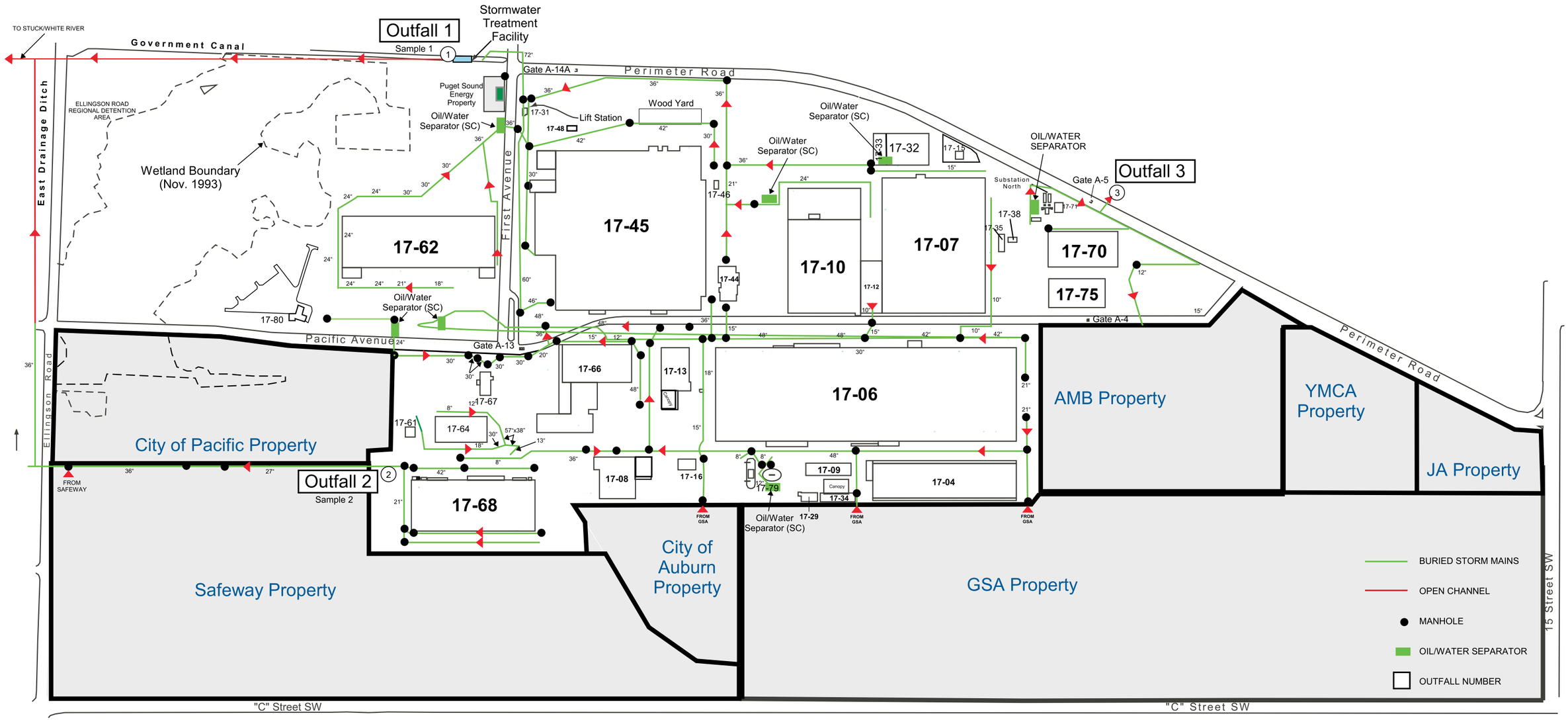
J2837-03

BOEING AUBURN
KCDNR SAMPLE SITES
PERMIT #7599



J2111-00

Auburn Site
Storm Sewer System



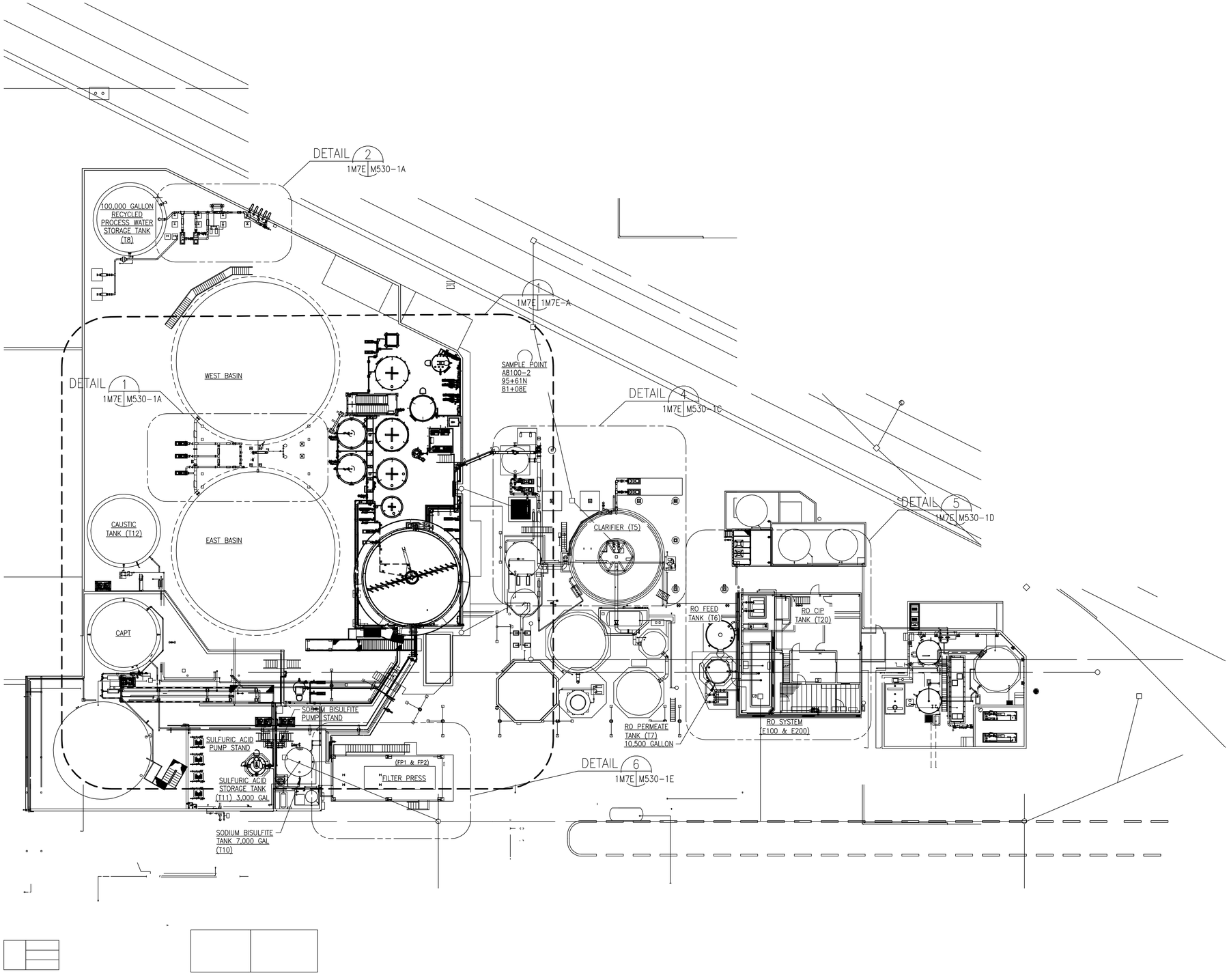
J2683-00

N

Relative Distances

Figure 1
Existing Storm Sewer System
Boeing Fabrication - - - - - Auburn Site

12/07/2016



PLAN
SCALE: 1"=20'

20 10 0 10 20 40
SCALE: 1"=20'

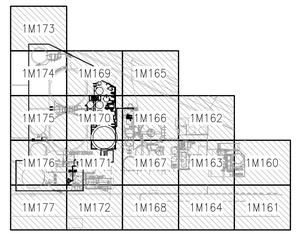
LEGEND

1. FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEETS M1A, M1B, M1E, AND M1F.

GENERAL NOTES

1. FOR MATERIAL AND OTHER PROJECT INFORMATION REFER TO PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.
2. UPPER PLAN PIPING AND EQUIPMENT SHOWN ON 2M7E AND 2M7E-A.

REFERENCE DRAWINGS



KEY PLAN

RECORD DRAWING

This record drawing is a compiled representation of the constructed project. This record drawing has been prepared, in part, on information furnished by others during construction. This record drawing is believed to be correct to the best of the Engineer's knowledge, but all actual conditions and information represented on this record drawing have not been verified by the Engineer as accurate. It is advised that persons using this record drawing obtain independent verification of the accuracy of information referenced.

SYM	REVISION	BY	APPROVED	DATE
–	WPP RENEWAL J#567759-00/01	KJ	JAS	05.13.2009
A	WPP RENEWAL	JRT		07.18.2014
–	RECORD DRAWING	MIS		06.12.2015

BOEING

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

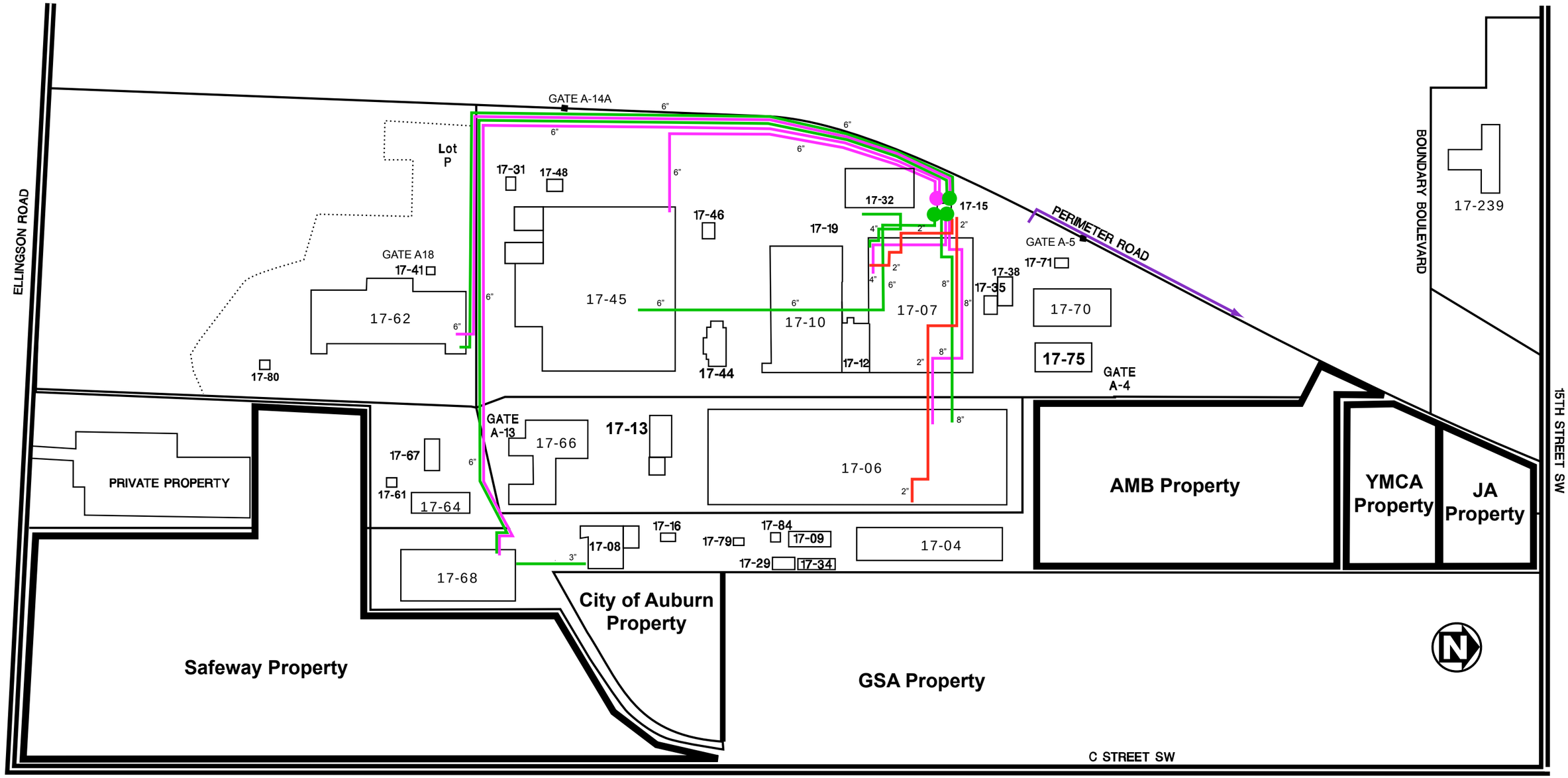
APPROVED BY	DEPT.	DATE

DRAWN A. PODOLSKY	06.12.2015	
CHECKED D. GARGEYA	06.12.2015	
ENGINEER J. TORRE	06.12.2015	
CHECKED G. HARRIS	06.12.2015	
APPROVED		
APPROVED		

SUBTITLE: MECHANICAL LOWER COMPOSITE PLAN
TITLE: BUILDING 17-15
MECHANICAL MASTER — AUBURN

CURRENT REVISION	SYMBOL —	DATE 06.12.2015
SHEET 1M7E		
JOB NO.		COMP NO.
DWG NO. 17-15-1M7E		

Auburn Site
Industrial Wastewater Plan



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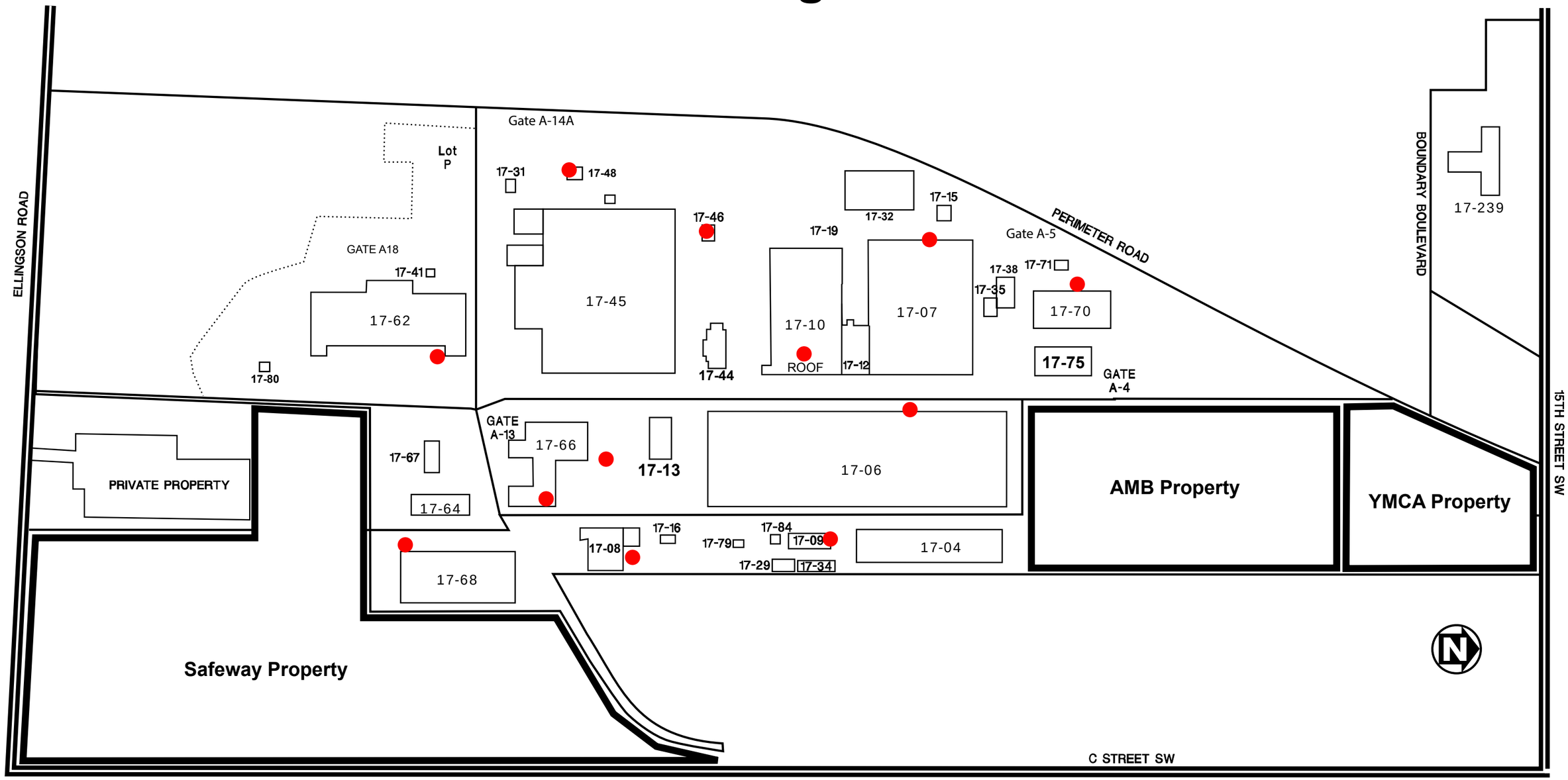
J2837-02

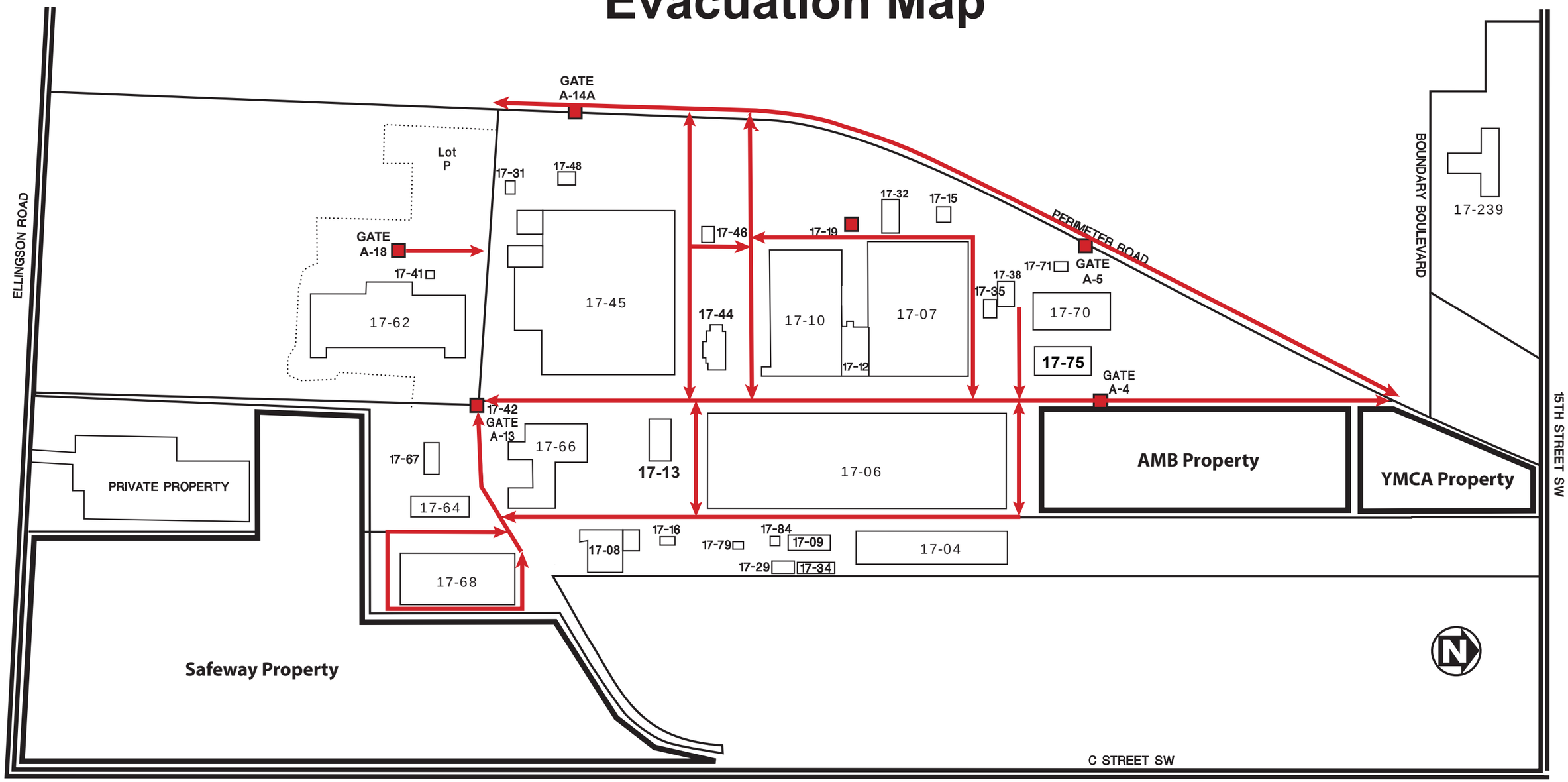
Auburn Site
Process Cooling Water Plan



● COOLING TOWER

J2837-00

Auburn Site
Evacuation Map



12/07/2016

J2837-01

6.0 SITE CONTROL, EVACUATION PLANS, AND EXTERNAL AGENCY AGREEMENTS

6.1 Site Control Procedures

Site control procedures are standard methods used by emergency response organizations to reduce hazards and protect personnel at the scene of an incident. The site control procedures involve establishing a series of restriction zones in order to:

- Protect the public or surrounding work areas.
- Reduce the level of exposure for emergency response personnel.
- Prevent contamination of personnel and the environment beyond the original spill scene.
- Reduce confusion in the area.
- Prevent others, including response personnel, from unknowingly entering a contaminated area.

The Incident Commander (IC) establishes the restriction zones as soon as possible. The zone boundaries are based on the degree of hazard and function. Boundaries may change during an emergency response, depending upon the nature of the emergency and the changing environmental conditions.

All spills require a minimum of three restriction zones and a maximum of four. Depending upon the hazards involved, even small spills may require the establishment of all four zones. Restriction zones are cordoned off by means of barrier tape, barricades, or security vehicles. The four restriction zone types are:

- Exclusion Zone ("Hot Zone")
- Contamination and Reduction Zone ("Warm Zone")
- Support Zone ("Cold Zone")
- Security Zone

Security will typically control access to the security zone, while the fire departments and the Hazmat team will control access to the inner three restriction zones.

6.1.1 Exclusion Zone ("Hot Zone")

The Exclusion Zone, or "Hot Zone", is the innermost zone, surrounded by the "hot line." This zone is the area of the spill or a potential spill. In most cases, the outer boundary of the Exclusion Zone should be established on all sides, clearly marked by lines, placards, hazard tape and signs, or enclosed by physical barriers such as chains, fences, or ropes. Access to the Exclusion Zone is controlled by a *single* entry-exit control point. All personnel entering the Exclusion Zone must wear the required level of protection and must exit through the same control point. The IC is in command of the Exclusion Zone and control point.

6.1.2 Contamination Reduction Zone ("Warm Zone")

The Contamination Reduction Zone is the second innermost zone, which lies between the Exclusion Zone and the Support Zone. The purpose of this zone is to reduce or eliminate contamination beyond the Exclusion Zone; hence it is also referred to as the "Decontamination Zone," "Decon Area," or "Warm Zone." Any decontamination of personnel or equipment is completed in this zone before they enter the Support Zone. This zone also has a *single* entry-exit control point, under the command of the IC. A specific level of protection will be required for personnel in this area; the level of protection may or may not be the same as that required for the Exclusion Zone.

6.1.3 Support Zone ("Cold Zone")

The Support Zone, or "Cold Zone," is located outside the Contamination and Reduction Zone and inside the Security Zone. No level of protection is necessary in this zone. Typically, Security controls access to the Security Zone and the Hazmat team and the IC control the inner site control zones, including the "Hot Zone" and "Warm Zone."

Generally, the command post is located in the Support Zone, along with all other support personnel and services directly involved in the emergency response. Entry and exit to this zone is through *one or more* security checkpoints, usually via the "safe route" designated by the IC. This area, also under the command of the IC, is to remain uncontaminated and serves as headquarters for spill response operations and the supply and equipment staging area.

The IC will attempt to select an area for the Support Zone that will serve needs throughout the response. However, under certain situations, such as a major change in wind direction or the spread of a fire, the Support Zone may need to be relocated during an emergency response operation.

6.1.4 Security Zone

The Security Zone, which surrounds the Support Zone, is set up to restrict the access of the public, and allow emergency response personnel and equipment to enter the Support Zone. The Security Zone protects persons not involved in the emergency response from being contaminated by the spill and restricts the traffic in the area of the spill to authorized, informed spill response personnel. Boeing Security is responsible for tracking and controlling response personnel within the Security Zone, and maintains close contact with the IC to stay updated on the safe route to the Support Zone.

Boeing Security informs all authorized personnel of the designated safe route for passing through the Security Zone.

6.2 Evacuation and Shelter in Place Plans

In the event that a specific area needs to be evacuated, area specific evacuation plans will be implemented. The evacuation of any area, building or the entire site will be coordinated by the Boeing Fire Department and Boeing Security. The IC, or alternate maycall for a partial or complete evacuation of the entire site in response to an emergency situation involving a hazardous substance, dangerous waste or dangerous waste constituent that threatens the health and safety of site personnel. The IC will base the decision for this action on personal analysis of the situation in coordination with other appropriate organizations. The IC maintains this authority until relieved by the local jurisdiction, under applicable local emergency response agreements. The site specific evacuation routes are contained in Section 5, Maps, of this plan.

During an Auburn Site evacuation, the following actions are taken:

- Security and Fire Protection are dispatched to the incident location and the senior Fire Officer on scene becomes the IC.

- The IC determines if the incident will result in an evacuation or a shelter in place.

For an evacuation:

- IC determines which gates will be used for evacuation, depending on the location of the incident, wind direction, and occupancy by personnel.
- IC signals evacuation via available emergency notification processes. Evacuation directions at the scene may also be

transmitted by Boeing Security personnel on security and fire vehicle public address systems or portable loudspeakers.

- Personnel, visitors, and contractors are directed to leave the site through designated exit gates.
- Personnel are directed to regroup at the areas specified by the IC during evacuation instructions.
- Building evacuations will be conducted in accordance with the building specific evacuation plan and coordinated by Boeing Fire and Security.

For a shelter in place:

- IC signals a shelter in place via available emergency notification processes. Evacuation directions at the scene may also be transmitted by Boeing Security personnel on security and fire vehicle public address systems or portable loudspeakers as well as through word of mouth and possibly through the use of whistles and the Desktop Emergency Notification System (DENS)
- Personnel, visitors, and contractors are directed to travel to their pre-defined shelter in place locations.
- Personnel, visitors, and contractors are released from the shelter in place activity after the emergency has been taken care of

For an evacuation, no one is to re-enter the site or a building until authorized by the IC or delegate. Site activities are resumed only when the hazards that necessitated the evacuation are controlled and the area has been declared safe to re-enter. The determination of when the site may be safely reoccupied is made by the IC in coordination with FAM and EHS. Permission to re-enter the site may be given over police and fire vehicle public address systems and over portable loudspeakers. Site activities resume only after authorization by the IC.

If the IC's assessment indicates that evacuation of local offsite areas encompassing the site is required, the IC coordinates the evacuation with the city police and fire departments. The city police and fire departments then proceed to the designated areas and assist in evacuation procedures.

6.3 Coordination with External Agencies

Auburn Site has 24-hour on-site emergency fire and security support. They also have a small fully equipped Emergency Response/Hazmat team at the Auburn Site.

If the Boeing Fire Department requires additional emergency response assistance, the IC will make the necessary arrangements through the 911

emergency telephone network systems to get aid from neighboring jurisdictions or from other Boeing sites.

Arrangements have been made to familiarize police, fire departments, and emergency response teams with the Auburn Site facility layouts, properties of hazardous substances handled at the facility and their associated hazards, places where personnel are normally working, entrances, transportation routes, and possible evacuation routes.

Arrangements have also been made to familiarize local hospitals with the properties of dangerous substances managed at the site, their chemical properties, and the types of illness or injury that could result from a fire, explosion, or other release. All emergency provider agreements stipulate the same primary emergency authority that will serve as the IC for the applicable jurisdictional area.

Appropriate emergency response service organizations or providers are provided with a copy of this contingency plan and relevant background information, upon request.

Section 7 provides additional information for reporting and working with regulatory agencies, e.g. Washington State Department of Ecology, Environmental Protection Agency and the National Response Center. Please refer to these sections in addition to the preceding subsections.

6.3.1 Local Fire Departments

Boeing has verbalmutual aid agreements at Auburn Site with fire departments of surrounding communities. In general, under these verbal mutual aid agreements, appropriate municipal fire departments will assist the Boeing Fire Department and Emergency Response Team for an emergency at a Boeing facility. Conversely, the Boeing Fire Department and/or Emergency Response Team can be called upon to assist municipal fire departments as needed when resources allow. In the event mutual aid is required at Auburn Site, the IC will notify the Valley Regional Fire Authority and supply them with all available information relative to the request for their assistance. This will enable them to respond with adequate staff and equipment to assist in handling the emergency.

On receiving a mutual aid request for equipment, the duty supervisor will consider the following factors before dispatching equipment and staff:

- The number of units in service.
- Boeing operations involving Boeing Fire or the Emergency Response / Hazmat Team at the time of the request.
- Available Boeing staff.

One staffed unit may be dispatched in response to a mutual aid request. At the time of the request, the IC will arrange a point of escort for the apparatus at the gate nearest the direction from which the Boeing unit is coming. The IC will notify the Fire Chief, the Security Manager, and the Director of FAM as to the equipment dispatched and the extent of the mutual aid request.

The Boeing Fire Department, located at the Auburn Site, Building 17-16, is the main provider for Auburn Site in cases of structural and hazardous material fires and, along with the Emergency Response Team, hazardous releases.

6.3.2 Local Police

When necessary, the IC will direct the Security/Fire Dispatcher to contact the City of Auburn Police Department, using the 911 emergency telephone networks. The police will respond according to Boeing and local emergency service arrangements.

6.3.3 Local Hospitals

This plan is sent to local hospitals to familiarize their emergency department with the properties of hazardous substances handled at Auburn Site. Through the 911 emergency telephone network, medical support is available, as necessary, from the many hospitals in the area. Information is relayed to the closest available ambulance and the appropriate hospital emergency staff through the 911 system.

If the injury is not life threatening, the employee may select the hospital of choice. **Harborview Medical Center** is the only local hospital equipped to handle *chemical decontamination*. **Auburn Regional Hospital** is the nearest local hospital to be contacted for *minor injuries* at the Auburn Site.

6.3.4 Washington Department of Ecology (Ecology)

In the State of Washington, the Washington Department of Ecology (Ecology) administers the dangerous waste regulations and stormwater permits. In the event of an incident involving DOT determined reportable quantities of spilled materials or any spill or release into the environment that threatens human health or the environment, Ecology must be notified immediately and they may send an on-scene coordinator to the site to determine the cause of the spill and to ensure that discharge is secured and cleaned up. Ecology may require Auburn Site to clean up the released hazardous substances; this may include sampling or removal of the released substances. Additionally, Ecology may require that property outside the control of Auburn Site be restored and resources such as plants and fish be replenished. Ecology may send a representative from water quality, hazardous waste compliance or site cleanup, dependent upon which

program was impacted, to the incident to oversee response activities. After the initial emergency is over, the Ecology Spill Response Team may turn the investigation of the incident over to another appropriate group within Ecology (*e.g.*, Water Quality). Ecology may require submittal of a written cleanup plan for agency approval, and typically will evaluate the adequacy of the final cleanup.

Interface and coordination with the Department of Ecology will be handled by the Site Emergency Response Coordinator for Environmental. Additionally, other agreements have been established with Ecology in the event of a spill or release, refer to Section 7.

6.3.5 Environmental Protection Agency

The EPA hazardous waste regulations form the main basis for this CCP, which describes preparedness and prevention in addition to emergency response procedures. (However, because Washington State has an EPA authorized program, Washington State Dangerous Waste Regulations apply in lieu of the EPA regulations.) The EPA, jointly with the Coast Guard, has established the National Response Center (NRC), which receives reports of releases of hazardous substances. Notice to EPA is required for releases which trigger CERCLA and EPCRA regulations.

6.3.6 State Emergency Response Commission (SERC)

The State Emergency Response Commission (SERC) is appointed by the Washington State Governor and is coordinated through the State Department of Community Development. Coordination of local emergency response activities is typically deferred to the appropriate Local Emergency Planning Committee (LEPC). In the event of an incident involving offsite releases of hazardous substances, the site Emergency Response Coordinator for Environmental or designee will notify the SERC.

6.3.7 Local Emergency Planning Committee (LEPC)

The LEPC is a committee formed in local emergency planning districts to provide community emergency response planning. The City of Auburn is a member of the King County LEPC.

The involvement of the LEPC in emergency response planning is authorized under SARA Title III (community right-to-know [CRTK] law) and is administered under federal and state CRTK regulations. In the event of an incident involving offsite releases of hazardous substances, the Site Emergency Response Coordinator for Environmental or designee will notify the King County LEPC. The LEPC may coordinate responses from local agencies.

6.3.8 King County Department of Natural Resources and Parks (KCDNR)

KCDNR has been authorized by the State of Washington to issue permits for industrial wastewater discharges into the local sanitary sewer system. KCDNR publicly owned treatment work (POTW) permits state conditions under which Auburn Site must contact KCDNR in the event of an emergency. In the event of an incident, KCDNR requires that all unauthorized discharges to the sanitary sewer system be reported immediately. If KCDNR discharge conditions are exceeded, a written report must be submitted within 14 days of the incident.

6.3.9 Puget Sound Clean Air Agency (PSCAA)

PSCAA is the local agency regulating air quality and releases in the Puget Sound area. PSCAA must be notified of sudden unplanned or accidental releases to the ambient air. The Site Emergency Response Coordinator for Environmental or designee will make the appropriate notifications to PSCAA. Further investigation and reporting may be required by PSCAA.

6.3.10 National Response Center (NRC)

The National Response Center (NRC) is operated jointly by the US Coast Guard and the EPA. NPDES industrial discharge permits state conditions under which Boeing Auburn must contact the NRC. Typically, conditions include spills into receiving waters of the State, such as Government Canal or the White River, and spills of oil products which cause a film or sheen on the water. In addition, if a CERCLA hazardous substance is spilled into the environment in a quantity exceeding the reportable quantity (RQ), the NRC will be notified. Notification to the NRC is also required when the emergency triggering the CCP could threaten human health or the environment outside the facility and evacuations may be advisable. The Site Emergency Response Coordinator for Environmental or designee will contact the NRC if necessary.

6.4 Release Mitigation

After the emergency incident is under control, mitigation and cleanup measures start. The following section describes responsibilities and procedures for conducting these activities.

6.4.1 Responsibilities

Cleanup activities are normally a joint effort of FAM and Environmental. If outside services are necessary for restoration work, a representative from FAM will typically contract those services under their emergency services contract. Representatives from Environmental will evaluate and determine when mitigation and cleanup efforts at the incident are complete. Ecology may require certification of cleanup and restoration.

Depending on the nature and circumstances of the incident, Ecology may require submittal of a written mitigation and cleanup plan before cleanup activity commences. Although Ecology typically does not issue specific instructions for cleanup, it may impose requirements such as waste designation or spill area restoration.

6.4.2 Spill Mitigation Procedures

In general, the IC delegates spill control and mitigation activities to the Hazmat team. The Hazmat team is responsible for taking appropriate action to protect human health and the environment during a hazardous release. This may include shutting off valves, constructing dikes for liquid spills, protecting drain openings, setting drums upright, and carrying out other containment measures that can be done safely with respect to the training level and proficiency of Hazmat team members responding to the incident.

The Boeing Fire Department and FAM Dispatchers will coordinate the transfer of emergency equipment by Hazmat team members to the Support Zone at the location of the incident. These dispatchers are in contact with the Incident Command Post so that equipment and personnel are delivered by the safest route to the Support Zone.

6.5 Cleanup Procedures

6.5.1 General Activities

Once the emergency situation is under control, the IC will coordinate with Environmental and FAM to begin cleanup and disposal of the release and any materials contaminated by the release. Typically, the IC delegates the cleanup and disposal activities to the Site Emergency Response Coordinator for Environmental, the Hazmat team members. Cleanup is conducted as soon as possible after a release, fire, or explosion to avoid further contamination or recurrence and to isolate any incompatible wastes.

Job Safety Analyses (JSA) outlines specific spill cleanup procedures for typical releases. General spill cleanup guidelines are as follows:

- Response personnel are not to enter a contaminated area until donning appropriate/required personal protective equipment.
- Response personnel are not to perform actions unless they have proper backup personnel and use the "buddy system".
- Response personnel are first to attempt to stop the source of the spill or release and then contain the release by using berms, dikes, or absorbents.

- Response personnel are to use absorbents that have been approved by Environmental to contain a spill.
- Response personnel are to properly contain, label, mark, and dispose of contaminated materials and wastes according to procedures approved by Environmental.
- Response personnel are to obtain authorization from Boeing Safety and Industrial Hygiene before allowing employees to re-enter the area.

6.5.2 Polychlorinated Biphenyls (PCBs) Spill Cleanup Procedures

PCB spill cleanup procedures depend on the concentration, nature, quantity, and location of the spill. Environmental or the ERC will provide cleanup and disposal guidance. Please refer to Section 7 for additional TSCA reporting requirements. The TSCA regulations for PCBs (40 CFR 761) detail requirements for the following:

- Agency notification requirements.
- PCB cleanup standards.
- Storage and disposal of PCB spill cleanup materials and wastes.
- Delineation of decontamination area.
- Decontamination procedures.
- Post-cleanup sampling.
- Certification of cleanup.

6.5.3 Underground Storage Tank (UST) Release Procedures

Mitigation of an underground storage tank release may include the following measures per the Model Toxics Control Act (WAC 173-340):

- Using release confirmation procedures such as a tank system test, tank system inspection, or site investigation.
- Determining the RQ for a release and agency notification requirements.
- Developing release control or contaminant methods (within 24 hours).
- Free product removal.
- Investigating soil and groundwater contamination.
- Corrective action plan.

- Labeling, marking, containing, transporting, and disposing of contaminated materials, as approved by Environmental.

6.6 Equipment Decontamination Procedures

The development of decontamination procedures is guided by a Job Safety Analysis (JSA) and support from Environmental. The procedures developed are specific and are based on the character of the released substances. Auburn Site stocks decontamination supplies and equipment, such as a steam cleaner, wash tubs, and detergents.

6.7 Designation, Packaging, and Disposal of Waste

Environmental ensures that wastes generated by the release are properly designated, treated, stored, or disposed of in accordance with Washington State dangerous waste regulations (WAC 173-303) and EPA hazardous waste regulations. Wastes include any material contaminated with the released substances. Sampling and testing of the wastes and contaminated materials may be required in order to properly designate the wastes and to determine cleanup and disposal methods. Environmental will direct the packaging, labeling, marking, transport, and disposal of the waste material.

In the event that a dangerous waste shipment arrives at the Auburn Site damaged to the extent that it presents a hazard to the public health or the environment, the shipment will be handled in accordance with WAC 173-303-370(5)(c), Manifest system requirements. If such an occurrence were to happen the shipment would be isolated in a contained area and the Hazmat Team would respond and mitigate the situation. The hazardous wastes will be disposed of in accordance with WAC 173-303 under the direction of Environmental. The same process may be used to handle a shipment of hazardous material that presents a hazard to the public health or the environment.

6.8 Equipment Decontamination and Spill Response Kit Resupply

The IC typically delegates emergency equipment decontamination, maintenance, and re-supply to FAM , Fire and Security, and Environmental personnel. Before operations are resumed after an emergency, Environmental personnel may notify, where applicable, Ecology and appropriate local authorities that:

- No waste that might be incompatible with the incident material will be treated, stored, or disposed of until cleanup procedures are completed.
- All emergency equipment listed in this contingency plan is fit for its intended use before operations are resumed.

If used, servicing and recharging of fire-extinguishing equipment should be within 24 hours of the conclusion of emergency response activities. Where this cannot be done within the specified time, a full-time fire officer is assigned to patrol the area until the equipment is serviced. In addition, the IC or his designee may direct the following:

- Steam-cleaning of equipment used in the response and of areas affected by dangerous waste releases (with Environmental and Health and Safety approval).
- Collecting, containerizing and proper disposal of decontamination washings for sampling.
- Resetting of automatic sprinklers, as necessary.
- Cleaning or replacement of personal protective equipment.
- Visual inspection of process areas and equipment affected by the incident.

6.9 Outside Contractors

A FAM representative, the Site Emergency Response Coordinator for Environmental or designee may call in outside contractors if the spill cleanup involves recovery work beyond the Boeing property line or if more equipment or additional manpower is required.

6.10 Restoration of Property and Resources

Once the emergency situation is under control, the IC may need to coordinate with Environmental to restore resources affected by the release. Property outside the control or ownership of Boeing - Auburn may require restoration (*e.g.*, fish, plants) in a manner acceptable to Ecology.

6.11 Certification of Cleanup

Environmental evaluates mitigation and cleanup efforts and determines when such efforts are complete.

7.0 REPORTING

Regulations have been established to control the management of hazardous substances, dangerous waste and dangerous waste constituents. Table 7-1 provides a reference guide of the regulations applicable to specific types of releases and Appendix 1 provides an initial reporting process to be used by the Emergency Response Coordinator for Environmental or designate. The scope of these regulations and their application to incident types are summarized in this section. This section specifically addresses:

- Definitions of reportable releases.
- Requirements for verbal notification.
- Requirements for written reporting.

Notification and reporting requirements are both internal to Boeing Auburn and external to federal, state, and local agencies. Boeing Auburn internal requirements are identified in Section 4. External requirements are discussed in this section, organized by agency and regulation as follows. For quick response, the initial notification process is available in Appendix 1.

- Washington State Department of Ecology (WDOE)
  - Dangerous Waste Regulations
  - Underground Storage Tanks (USTs)
  - Industrial Stormwater General Permit Requirements
- Environmental Protection Agency (EPA) - National Response Center
  - Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)
  - Superfund Amendment Reauthorization Act (SARA Title III) (Community Right-To-Know)
  - Toxic Substance Control Act (TSCA)
  - Clean Water Act
- King County Department of Natural Resources (KCDNR)
- Puget Sound Clean Air Agency (PSCAA)
- Washington State Department of Transportation (WA-DOT)
- Washington State Department of Occupational Safety and Health (WDOSH)
- Washington State Site Specific Environmental Permits

Table 7-1

REGULATIONS POTENTIALLY APPLICABLE TO SPECIFIED RELEASE						
Released Substance	**To Air**	**To Receiving Water On Site**	**To Receiving Water Offsite**	**To Soil On Site**	**To Soil Offsite**	**To Groundwater**
Air Emissions	PSCAA WA-DW	N/A	N/A	N/A	N/A	N/A
Underground, Above-ground Storage Tanks	PSCAA[4] SARA[4]	CWA WA-UST[1]	CWA NPDES WA-UST[1]	WA-UST[1]	WA-UST[1]	WA-UST[1]
Wastewater	N/A	CWA	CWA NPDES	WA-DW	CERCLA SARA[3] WA-DW WA-DOT[2]	CERCLA SARA[3] WA-DW
Dangerous Waste; Hazardous Substance	PSCAA SARA WA-DW	CWA WA-DW	CERCLA CWA NPDES SARA[3] WA-DW WA-DOT[2]	WA-DW	CERCLA SARA[3] WA-DW WA-DOT[2]	CERCLA SARA[3] WA-DW
PCBs	PSCAA TSCA WA-DW	CWA TSCA WA-DW	CERCLA CWA NPDES TSCA WA-DW	TSCA WA-DW	CERCLA TSCA WA-DW	CERCLA TSCA WA-DW

[1] UST's only
[2] Associated with transportation
[3] SARA only applicable if release is extremely hazardous substance
[4] Non-Petroleum only

CERCLA	-	Comprehensive Environmental Response, Compensation and Liability Act
CWA	-	Clean Water Act
NPDES	-	National Pollutant Discharge Elimination System
PSCAA	-	Puget Sound Clean Air Agency
SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substance Control Act
WA-DW	-	Washington Dangerous Waste Regulations
WA-DOT	-	Department of Transportation
WA-UST	-	Washington Underground Storage Tank Regulations

7.1 Washington Department of Ecology

Purpose: Regulates the spill, release and discharge of pollutant, dangerous waste, dangerous waste constituent, and hazardous substance into the air, water, groundwater, and/or soil. The Environmental Protection Agency (EPA) has delegated authority for programs under Resource Conservation Recovery Act (RCRA), Underground Storage Tanks (USTs), Clean Water Act and Clean Air Act.

Application: Spill, release or discharge of a pollutant, dangerous waste, dangerous waste constituent or hazardous substance into any media.

7.1.1 Reportable Releases - WAC 173-303-145 Dangerous Waste Regulations - *Spills and discharges into the environment*

All dangerous wastes or hazardous substances released into the environment are reportable, regardless of amount, if they are a threat to human health or the environment. Dangerous wastes and hazardous substances covered by this section include, but are not limited to, all PCB wastes generated from the salvaging, rebuilding, or discarding of transformers or capacitors containing greater than 2 ppm and less than 50 ppm PCBs.

Additionally, review WAC 173-303-360 to determine if the release has implemented your contingency plan thereby triggering the requirements of WAC 173-303-360 in addition to the requirements of WAC 173-303-145.

Verbal Notification Requirements

If Release to Environment (Ground, Groundwater or Receiving Water):

The ERC or designee will IMMEDIATELY (a good definition for immediately is within 15 minutes) notify:

- Washington Department of Ecology at 425-649-7000.

If Release will leave the Boeing - Auburn boundaries immediately notify the:

- National Response Center (NRC) at 1-800-424-8802 if it poses a threat to human health or the environment or exceeds the reportable quantity (RQ)
- King County LEPC at 206-296-3830.

The Site Emergency Response Coordinator for Environmental or designee also must consider IMMEDIATELY notifying either or all:

- City of Algona at 253-833-2897 if the spill is outside Boeing property.
- City of Pacific at 253-929-1130 if the spill is outside Boeing property.
- City of Auburn at 911 and/or 253-876-1925 if the spill is outside Boeing property.

If Release to Environment (Emissions to the Air):

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- Puget Sound Clean Air Agency (PSCAA) at 206-343-8800 or 1-800-552-3565.
- Washington Department of Ecology at 425-649-7000.
- King County LEPC at 206-296-3830 if the release poses a threat to human health or the environment.

The Site Emergency Response Coordinator for Environmental or designee also must consider IMMEDIATELY notifying either or all:

- City of Algona at 253-833-2897 if the release poses a threat to human health or the environment.
- City of Pacific at 253-929-1130 if the release poses a threat to human health or the environment.
- City of Auburn at 911 and/or 253-876-1925 if the release poses a threat to human health or the environment.

If Release will leave the King County boundaries also evaluate notifying the:

- Pierce County Local Emergency Planning Committee (LEPC) at 253-798-6595.

Release to Secondary Containment:

- None required if cleaned up in a *timely manner* and there is no threat to human health or to the environment.

Release not into the environment and doesn't pose a threat to human health:

- None Required.

Written Reporting Requirements

Although there are no written reporting requirements under WAC 173-303-145 ensure that the release or discharge did not trigger the reporting requirements of WAC 173-303-360 or any other applicable provision (e.g., releases to receiving water reporting).

7.1.2 Reportable Releases - WAC 173-303-360 Dangerous Waste Regulations - *Emergencies*

An emergency circumstance involving the release or threat of release of dangerous waste or dangerous waste constituent, including a fire, explosion, or unplanned sudden or non-sudden release, which could threaten human health or the environment must be reported. (Such emergency circumstance would trigger the Contingency Plan.)

Verbal Notification Requirements

If Sudden Release, Fire, or Explosion:

The IC, in coordination with the Site Emergency Response Coordinator for Environmental or designee, will assess whether the incident is a threat to human health or the environment. If assessed as a threat, the Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- Washington Department of Ecology at 425-649-7000.
- NRC at 1-800-424-8802 (if the threat is to human health or the environment outside the facility and evacuations may be advisable).
- King County LEPC at 206-296-3830.

The Site Emergency Response Coordinator for Environmental or designee must also consider IMMEDIATELY notifying either or all:

- City of Algona at 253-833-2897.
- City of Pacific at 253-929-1130.
- City of Auburn at 911 and/or 253-876-1925.

Additionally the Site Emergency Response Coordinator for Environmental or designee will assess whether the incident threat will leave the boundaries of King County and if so will evaluate whether to IMMEDIATELY notify:

- Pierce County Local Emergency Planning Committee at 253-798-6595.

If Any Reportable Release Occurs:

Before resuming operations in the affected area, the Site Emergency Response Coordinator for Environmental or designee must notify Washington Department of Ecology (425-649-7000), and appropriate state and local authorities that the following conditions are met:

- No waste is being treated, stored, or disposed of at the facility that might be incompatible with the released material.
- All emergency equipment listed in the contingency plan is cleaned and fit for its intended use.

Written Reporting Requirements

The Site Emergency Response Coordinator for Environmental or designee will:

- Note the time, date, and details of the incident in the operating record.
- Submit to Washington Department of Ecology, a written report on the incident WITHIN 15 DAYS of the incident. The report must include the following:

  - Name of the facility owner or operator.
  - Facility address.
  - Facility telephone number.
  - Date of the incident.
  - Time of the incident.
  - Type of incident.
  - Name of materials spilled.
  - Quantity of materials spilled.
  - Extent of injuries (if any).
  - Assessment of actual or potential hazards to human health or the environment, where this is applicable.
  - Estimated quantity of material recovered from the incident.
  - Disposition of the material recovered from the incident.
  - Cause of the incident.
  - Description of corrective action taken to prevent recurrence of the incident.

- Send the report to:

  Washington Department of Ecology
  Northwest Regional Office
  3190 160th Avenue SE
  Bellevue, Washington 98008-5452

- Maintain copies of incident reports in the facility operating record until facility closes.
- Maintain copies of incident reports at the incident site.

7.1.3 Reportable Releases - WAC 173-360 *Underground Storage Tank (UST)*

Any release or suspected release of a hazardous substance or petroleum product from an UST that exceeds the *de minimus* amount or is a threat to human health or the environment is reportable. A *de minimus* amount of petroleum is defined by Washington Department of Ecology as any amount that immediately evaporates. A release may be suspected if any of the following conditions exist:

- Released regulated substances are discovered at the UST site or in the surrounding area.
- Unusual operating conditions are observed (i.e., erratic behavior of product dispensing equipment, sudden loss of inventory), unless system equipment is found to be defective but not leaking and is immediately repaired or replaced.
- Monitoring results indicate that a release may have occurred.

Exceptions:

(1) A false alarm is confirmed.
(2) The monitoring device is found to be defective, is immediately repaired, recalibrated, or replaced, and additional monitoring does not confirm the release.
(3) For inventory control, a second month of data does not confirm the initial result.

Verbal Notification Requirements

For ANY Spill or Overfill of Hazardous Substance or Petroleum Product that exceeds the de minimus amount or is a threat to human health or the environment:

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- Washington Department of Ecology at 425-649-7000.

Refer to Section 7.1.2 Verbal Reporting Requirements for additional reports to be submitted to Washington Department of Ecology and other agencies in the event of an UST release.

For a Confirmed or Suspected Release:

The Site Emergency Response Coordinator for Environmental or designee must WITHIN 24 HOURS notify:

- Washington Department of Ecology at 425-649-7000.

Written Reporting Requirements

For a Suspected Release of Petroleum or Hazardous Substance:

The Site Emergency Response Coordinator for Environmental or designee will WITHIN 7 DAYS:

- Investigate and confirm the release, using procedures detailed in WAC 173-360-370.
- Complete checklists during the investigation for tank services or site checks.
- Submit the checklists to Washington Department of Ecology at:

  Washington Department of Ecology
  Northwest Regional Office
  3190 160th Ave. S.E.
  Bellevue, Washington 98008-5452

Please refer to Section 7.1.2 Written Reporting Requirements for additional reports to be submitted to Washington Department of Ecology in the event of an UST release.

7.1.4 Reportable Releases - WAC 173-226 Water Discharge General Permit Program – Washington State Industrial Stormwater General Permit

The General Permit regulates discharges of stormwater associated with industrial activity to waters of the State (receiving water and groundwater). Spills of contaminants, including but not limited to, a pollutant, dangerous waste, dangerous waste constituent or hazardous substance, and any other unauthorized discharge to stormwater are reportable.

Verbal Notification Requirements

If Release does not meet Industrial Stormwater General Permit requirements and poses a threat to human health or the environment:

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- Washington Department of Ecology at 425-649-7000. The following information must be provided:
  - The nature and cause of noncompliance, including the quantity and quality of any unauthorized discharges.
  - Exact dates and times of noncompliance and the anticipated time when the permittee will return to compliance.
  - Steps taken or to be taken to reduce, eliminate, and prevent recurrence of the noncompliance.

Written Reporting Requirements

If verbal notification is made:

The Site Emergency Response Coordinator for Environmental or designee will WITHIN 5 DAYS:

- Submit to Washington Department of Ecology a written report of the information transmitted verbally unless Washington Department of Ecology waives or extends this requirement.
- Send the report to:

  Washington Department of Ecology
  Northwest Regional Office
  3190 160th Avenue SE
  Bellevue, Washington 98008-5452

7.2 Environmental Protection Agency (EPA)

Purpose: Regulates the spill, release and discharge of pollutant, dangerous waste, dangerous waste constituent, and hazardous substance into the air, water, groundwater, and/or soil.

Application: Spill, release or discharge of a hazardous waste, hazardous waste constituent or hazardous substance into the air, water, groundwater, and/or soil. (Many of the reporting requirements under the Federal Program have already been delegated to the State Program and therefore, are not discussed below. (See Section 7.1.)

7.2.1 Reportable Releases - 40 CFR 300 and 302 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Any release of a substance that exceeds its Reportable Quantity (RQ) *within a 24-hour period* must be reported; reporting must occur immediately (generally interpreted to mean within 15 minutes) upon knowledge that an RQ has been released, *with the following exceptions:*

- A release that is wholly contained within a building or a structure and that does *not* reach the environment such as the ambient air, either directly or by means of a ventilation system, or through discharge drainage systems.
- Release to the environment is less than the RQ for that waste.

RQs apply to two types of hazardous substances -- listed and unlisted:

(1) Listed Hazardous Substances are the elements, compounds, hazardous substances, and extremely hazardous substances listed in Table 302.4 of 40 CFR 302.4 and Appendix A to Part 355 of 40 CFR 355.

If the quantity of all constituents in the mixture is known, then:

- The RQ for each constituent in the mixture applies.
- Notification is required if the amount released of any constituents in the mixture equals or exceeds the respective RQ for the constituent.
- The mixture rule applies to releases of listed and unlisted releases of hazardous waste as well.

Example:

If 5,000 pounds of a mixture containing 5% sulfuric acid were spilled, then the amount of the listed hazardous substance (sulfuric acid) released would be 250 pounds.

RQ for Sulfuric Acid	=	1,000 pounds
Released Amount	=	5,000 pounds x 5%
	=	250 pounds

Since the spilled amount is less than the RQ, the spill would *not be reportable* under CERCLA requirements.

If the quantity of one or more of the constituents is unknown, then:

- The constituent with the lowest RQ is used for reporting.
- If there is an unknown quantity of constituent, assume that it is 100% of the mixture.
- Notification is required if the *total* amount of the *mixture* released equals or exceeds the RQ for the mixture.

Example:

If 1,000 pounds were spilled of a mixture containing 10% MEK and an unknown amount of toluene then the RQ for the released mixture would be 1,000 pounds since toluene has the lowest RQ.

RQ of MEK	=	5,000 pounds
RQ of Toluene	=	1,000 pounds
RQ of Mixture	=	1,000 pounds
Released Amount	=	1,000 pounds

Since the release of 1,000 pounds equals the 1,000-pound RQ for the mixture, the spill *would be reportable* under CERCLA requirements.

By contrast, if the concentration of the toluene in the mixture had been known to be 1%, the spill would not have been reportable.

Released Amount	=	1,000 pounds x 1%
	=	10 pounds Toluene

(2) Unlisted Hazardous Substances are solid wastes, as defined by 40 CFR 261.2 that exhibit any of the hazardous waste characteristics of 40 CFR 261.20-24:

- Ignitability
- Corrosivity
- Reactivity
- Toxicity [per the Toxicity Characteristic Leaching Procedure (TCLP)].

The RQ for unlisted hazardous substances is as follows:

- Defined as 100 pounds for corrosive, reactive and ignitable wastes (D001, D002 and D003).
- The RQ for an unlisted hazardous waste that exhibits the characteristic for toxicity is the RQ of the contaminants on which the toxicity characteristic is based. (To find these RQ's see 40 CFR 302.4 under "Unlisted hazardous waste characteristics: characteristic of toxicity".)
- Applied to the *total volume of waste released*, not merely to the toxic constituent unless the concentrations of all hazardous constituents are known, then apply the mixture rule, e.g. Release of F001 concentration of constituents: unknown RQ for waste stream (10 pounds) would apply. Release of F001 concentration of constituents: 50% 1,1,1-trichloroethane (RQ=1,000 lbs), 50% water (no RQ). Spill is not reportable until 2,000 pounds is released.

Verbal Notification Requirements

If a Release Exceeds the RQ:

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- NRC at 1-800-424-8802.
- Washington Department of Ecology at 425-649-7000.

The following information must be provided:

- Name of person reporting the release.
- Telephone number of the person reporting the release.
- Name of the facility.
- Address.
- Time of the incident.

- Type of incident.
- Name of material spilled.
- Quantity of material spilled.
- Extent of injuries (if any).
- Possible hazards to human health or the environment outside the facility.
- Any evacuation that occurred.
- Estimated property damage.
- Other agencies notified.

Written Reporting Requirements

None

Note: Reference 7.1.1 and 7.1.2 in this section for Washington State written reporting requirements.

7.2.2 Reportable Releases - 40 CFR 355 *SARA Emergency Planning and Community Right-To-Know*

Reportable releases under Community Right-to-Know regulations include:

- Any reportable quantity of an extremely hazardous substance (40 CFR 355, Appendices A and B) that leaves the facility.
- Any reportable quantity in excess of the RQ of a CERCLA hazardous substance (40 CFR 302.4) that leaves the facility.

Verbal Notification Requirements

For Any Reportable Release:

The Site Emergency Response Coordinator for Environmental or designee must IMMEDIATELY notify:

- Washington Department of Ecology at 425-649-7000.
- NRC at 1-800-424-8802.
- SERC at 1-800-258-5990.
- King County LEPC at 206-296-3830.

The Site Emergency Response Coordinator for Environmental or designee must consider IMMEDIATELY notifying either or all:

- City of Algona at 253-833-2897.
- City of Pacific at 253-929-1130.
- City of Auburn at 911 and/or 253-876-1925.

If Release will leave the King County boundaries, evaluate the need to notify:

- Pierce County LEPC at 253-798-6595.

For Any Hazardous Substance Release or Extremely Hazardous Substance in Excess of the RQ:

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- NRC at 1-800-424-8802.
- Washington Department of Ecology at 425-649-7000.
- SERC at 1-800-258-5990.
- King County LEPC at 206-296-3830.

The Site Emergency Response Coordinator for Environmental or designee must consider IMMEDIATELY notifying:

- City of Algona at 253-833-2897.
- City of Pacific at 253-929-1130.
- City of Auburn at 911 and/or 253-876-1925.

If Release will leave the King County boundaries also consider:

- Pierce County LEPC at 253-798-6595.

The Following Information Must Be Provided to All Parties Notified:

- Chemical name or identity of the substance involved in the release, if known.
- Indication if the substance is an extremely hazardous substance.
- Estimated quantity of substance released.
- Time of the release.
- Duration of the release.
- Medium or media into which the release occurred.
- Any known or anticipated acute or chronic health risks associated with the emergency.
- Where appropriate, advice regarding medical attention necessary for exposed individuals.
- Proper precautions to take as a result of the release, including evacuation.

- Names and telephone numbers of persons to be contacted for further information.
- Actions taken to respond to and contain the incident.

Written Reporting Requirements

For All Reportable Releases:

"As soon as practicable after a release", but not to exceed 7 days, the Site Emergency Response Coordinator for Environmental or designee must:

- Submit a written report containing all of the information reported verbally to the following agencies:

  Washington Department of Ecology
  Northwest Regional Office
  3190 160th Ave. S.E.
  Bellevue, Washington 98008-5452

  State Emergency Response Commission (SERC)
  20 Aviation Dr.
  Building 20, MS TA-20
  Camp Murray, WA 98430-5112

  King County Local Emergency Planning Committee (LEPC)
  3511 NE 2nd Street
  Renton, WA 98056

- Also submit a written report containing all of the information reported verbally, if they were notified, to:

  Pierce County Local Emergency Planning Committee (LEPC)
  2501 S. 35th St. Suite D
  Tacoma, WA 98409

- Environmental will maintain copies of all written reports and spill report logs.

7.2.3 Reportable Releases - 40 CFR Part 761 Toxic Substance Control Act (TSCA)

The Toxic Substance Control Act (TSCA) regulates materials containing polychlorinated biphenyl (PCBs) in concentrations equal to or greater than 50 ppm. The TSCA reporting requirements pertain to:

- All spills in excess of 10 pounds, containing PCBs in concentrations of 50 ppm or greater, must be reported to EPA - Region X.

Note: Reference Subsection 7.1.1 of this Section for Washington State requirements when dealing with PCBs. Also, under CERCLA, all PCB spills greater than 1 pound must be reported to the NRC at 1-800-424-8802. For releases of PCBs in concentrations less than 50 ppm, please refer to Washington Department of Ecology regulations Section 7.2.4. Additionally, if there is a threat that the spill will leave your property you must immediately notify the SERC and City of Auburn LESPAC and submit a follow-up letter as soon as practicable (do not exceed 7 days).

PCB RELEASE		
Spilled Quantity	**Recipient of Spill**	**Report to**
1 lb or more	Anything	National Response Center
10 lb or more	Anything	EPA Headquarters Pesticides and Toxic Substances Branch
Any quantity	Receiving water, sewers, drinking water, grazing lands, vegetable gardens	EPA Regional Office Pesticides Toxic Substances Branch
Less than 1 lbs.	Areas that <u>are not</u> receiving water, sewers, drinking water, grazing lands, vegetable gardens	No federal reporting required.

Verbal Reporting Requirements

Reporting requirements differ depending on where the material is spilled.

For All Reportable Spills of Over 10 Pounds:

The Site Emergency Response Coordinator for Environmental or designee must notify AS SOON AS POSSIBLE BUT NOT LATER THAN 24 HOURS after discovery of the spill:

- EPA-Region X, spill reporting number at 206-553-1263.

Written Reporting Requirements

The Site Emergency Response Coordinator for Environmental or designee must immediately review the regulations (40 CFR Part 761, Subpart G - PCB Spill Cleanup Policy which has specific and short time requirements) for:

- Specific cleanup standards and reporting requirements, which depend on where the material is spilled.
- Requirements for certification and decontamination.
- Document the clean-up records and certification of decontamination.
- Submit a written report if requested.

7.2.4 Reportable Releases - 40 CFR parts 110,112, and 117 Clean Water Act

As defined in the Clean Water Act (CWA), any visible oil sheen resulting from a petroleum release to receiving water is reportable. Additionally, any releases to receiving waters in excess of reportable quantities and any discharges in excess of CWA permit limits are reportable.

Verbal Notification Requirements

If Visible Oil Sheen:

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- NRC at 1-800-424-8802.
- Washington Department of Ecology at 425-649-7000.

Note: All non transportation-related petroleum product storage facilities are subject to this regulation. These facilities are required to prepare spill prevention, control, and countermeasure (SPCC) plans to prevent discharge of oil into United States waters. An SPCC plan has been prepared separately for Auburn Site. Notification and reporting requirements for petroleum releases to receiving water are addressed in this comprehensive contingency plan (CCP). Additionally, reference Sections 7.1.3 and 7.3 for Washington State reporting requirements.

In excess of reportable quantity:

The Site Emergency Response Coordinator for Environmental or designee will IMMEDIATELY notify:

- NRC at 1-800-424-8802.
- Washington Department of Ecology at 425-649-7000.

In excess of permit limits:

The Site Emergency Response Coordinator for Environmental or designee will notify within 24 hours:

- Washington Department of Ecology at 425-649-7000.

Written Reporting Requirements

Written report may be required (unless the requirement has been waived) via the Industrial Stormwater General Permit within 5 days of the Permittee becoming aware of the circumstances. The report must include:

i. A description of the noncompliance, including exact dates and times.

ii. Whether the noncompliance has been corrected and, if not, when the noncompliance will be corrected.

iii. The steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Note: Reference 7.1.1 and 7.1.4 in this section for Washington State written reporting requirements.

7.3 King County Department of Natural Resources (KCDNR)

Purpose: Regulates the discharge of waste water (including but not limited to a pollutant, dangerous waste, dangerous waste constituent and hazardous substance) to the local publicly owned treatment works facility (POTW).

Application: Un-permitted, or otherwise unauthorized discharge to the POTW.

Reportable Releases

The Boeing - Auburn KCDNR permit requires reporting of all pollutant discharges to the sanitary sewer that either:

- Exceeds the site's permitted discharge limits.

- Is a chemical waste or wastewater not authorized for discharge under the permit.
- Is a hazardous substance regardless of quantity.
- Is a non-routine discharge that is greater than 5,000 gallons per day, but otherwise meets permit limits.

Note: The storm drain system is not part of the municipal sewer system.

- Any other discharge not in compliance with conditions of the permit arising from:
  - Breakdown of equipment or facilities.
  - Any accident, including those caused by human error, negligence, or act of nature.

Verbal Notification Requirements

If release meets any of the above criteria:

The Site Emergency Response Coordinator for Environmental or designee must IMMEDIATELY notify:

- KCDNR Industrial Waste Emergency Hotline at 206-684-2404.

Additionally the Site Emergency Response Coordinator for Environmental or designee must consider notifying the following:

- The KCDNR Wastewater Treatment Plant at the South Treatment Plant in Renton at 206-684-2404.

Written Reporting Requirements

If Unable to Comply with Permit Conditions, such as a Spill or Accident:

The Site Emergency Response Coordinator for Environmental or designee must:

- Submit a written report WITHIN 14 DAYS to the KCDNR Industrial Waste Investigator for the Site.
- Include the following information:
  - The reason for the spill.
  - The actual quantity and quality of resulting waste discharged.

- Corrective action taken and the steps taken to prevent a recurrence.

- Maintain copies of the reports in Environmental and site files.

7.4 Puget Sound Clean Air Agency (PSCAA)

Purpose: Regulates the discharge of pollutants into the air.

Application: Releases of excess emissions which represent a potential threat to human health or safety, or which the owner or operator of the source believes to be unavoidable. ("Excess emissions" means emissions of an air pollutant in excess of any applicable emission standards.)

Reportable Releases

PSCAA requires reporting if there is a release of excess emissions. WAC 173-400-107.

Verbal Notification Requirements

A verbal notification is required if excess emissions represent a potential threat to human health or safety or the owner or operator of the source believes them to be unavoidable. (Note: Other excess emissions shall be reported within thirty days after the end of the month during which the event occurred or as part of the routine emission monitoring reports.)

The Site Emergency Response Coordinator for Environmental or designee must IMMEDIATELY notify as soon as discovery is made:

- Washington Department of Ecology at 425-649-7000.

Additionally the Site Emergency Response Coordinator for Environmental or designee must notify by FAX as soon as possible after discovery:

- PSCAA at FAX Number 206-343-7522.

Written Notification Requirements

For All Excess Emissions:

- Written notification required upon request by Washington Department of Ecology or PSCAA.
  - Known causes of the release.
  - Corrective measures taken.

— Preventive measures to be taken to minimize or eliminate the chance of recurrence.

- The report will be submitted to the following as requested:

  Puget Sound Clean Air Agency
  1904 Third Ave – Suite 105
  Seattle, WA 98101

  Washington State Department of Ecology
  Northwest Regional Office
  3190 160th Ave. S.E.
  Bellevue, Washington 98008-5452

Note: Reference 7.1.1 for release reporting to PSCAA of dangerous waste or hazardous substance released to the air.

Note: Reference 7.6.3 for Air Operating Permit requirements.

7.5 Washington Department of Transportation (WA-DOT) Reportable Releases 49 CFR Parts 100-199

Purpose: Regulates the discharge, spill or release of hazardous materials during transportation.

Application: If a discharge, spill or release occurs during transportation which results in injuries requiring hospitalization, in a fatality, in estimated carrier or other property damage exceeding $50,000, or in a fire, in breakage, in spillage, or in suspected radioactive contamination.

Reportable Releases

Reporting is required for incidents occurring during transportation (including loading, unloading, and temporary storage) of hazardous materials in which "as a direct result of hazardous materials" (49 CFR 171.15) any of the following occurs:

- A person is killed.
- A person receives injuries requiring hospitalization.
- Estimated carrier or other property damage exceeds $50,000.
- Fire, breakage, spillage, or suspected radioactive contamination occurs, involving shipment of radioactive material.
- A situation exists of such a nature that, in the judgment of the carrier, it should be reported (*e.g.*, a continuing danger to life exists at the scene of the incident.

Also reportable are the following:

- Any unintentional release of hazardous materials from a package, including a tank.
- Any quantity of hazardous waste has been discharged during transportation.

Verbal Notification Requirements

For Any Reportable Incident:

The driver, Transport Company, or Site Emergency Response Coordinator for Environmental or designee must IMMEDIATELY notify:

- DOT – hazardous materials at (360) 753-9875. If a release has occurred, the following information must be included in the notification:
  - Name of reporter.
  - Name and address of carrier represented by reporter.
  - Phone number where reporter can be contacted.
  - Date, time, and location of incident.
  - Extent of injuries, if any.
  - Classification, name, and quantity of hazardous materials involved, if such information is available.
  - Type of incident and nature of hazardous material involvement and whether a continuing danger to life exists at the scene.

If release occurs from a shipment transported by an aircraft contact IMMEDIATELY:

- The local FAA Civil Aviation Security Office at 425-227-2000.

Additionally, refer to Section 7.2.1 if the release exceeds an RQ and contact 911.

Written Reporting Requirements

The reporting requirements vary considerably, depending upon the type of incident and the amount released. The post-incident reporting requirements are located in 49 CFR 171.16 and also refer to EPCRA requirements under 42 USC 11004.

The Site Emergency Response Coordinator for Environmental or designee must WITHIN 30 DAYS of the date of discovery:

- Prepare a report to the US-DOT, *in duplicate*, using DOT Form F5800.1.
- Include in the report:
  - A copy of the hazardous waste manifest.
  - An estimate of the quantity of the waste removed from the scene and the name and address of the facility to which it was taken.
  - The manner of disposition of any removed waste (entered in Section IX of the report form).
- Submit the report to:

  Information Systems Manager
  US Department of Transportation
  Pipeline and Hazardous Materials Safety Administration
  DHM-63
  Washington, DC 20590-0001
- Maintain copies of any reports in accordance to MRRS Retention Schedule.

7.6 Washington State Site Specific Environmental Permits

The Auburn Site maintains environmental permits with federal, state, and local agencies such as EPA, WDOE, KCDNR, and PSCAA. The conditions of the permits, along with local, state, and federal regulations, specify when and to whom incidents must be reported. In the event of a release of hazardous substances at the Auburn Site, Environmental will comply with notification requirements of local, state, and federal agencies with jurisdiction.

7.6.1 King County Department of Natural Resources (KCDNR) Wastewater Pretreatment Plant Permit-By-Rule

Under section 90.48 of the Revised Code of Washington (RCW), KCDNR has been authorized by the State of Washington to issue permits for industrial discharges into the KCDNR sewerage system. The Auburn Site discharges wastewater to the regional KCDNR sanitary sewer system under an industrial discharge permit. The KCDNR permit sets effluent limitations and requires spill prevention procedures, notification to the Department of Ecology in the event of permit noncompliance, notification to KCDNR if a release enters the sewer system, containment and cleanup of unauthorized discharges, and follow-up reporting to KCDNR in the event of a release. This contingency plan addresses the notification and reporting requirements in the event of an incident.

Under Federal regulation, the wastewater pretreatment plant (WPP) and its associated tanks, sumps, and transport systems at the Auburn facility are exempt from RCRA regulation as a treatment, storage, and disposal facility per 40 CFR 264.1(g)(5) and (6). This Contingency Plan, which meets the requirements of WAC 173-303-350, is required for Permit-by-Rule status under WAC 173-303-802(5)(a)(iii)(F). The Auburn WPP is regulated under WAC 173-303-802 Permits by rule as a wastewater treatment unit. The Permit-by-Rule requires Auburn to comply with the POTW permit issued by KCDNR. Reference 7.3 for reporting requirements under KCDNR's permit.

7.6.2 Puget Sound Clean Air Agency (PSCAA) Permit Requirements

The Puget Sound Clean Air Agency (PSCAA) was created to administer the Washington Clean Air Act. PSCAA's area of authority includes King, Kitsap, Pierce, and Snohomish Counties.

The Boeing-Auburn Facility is subject to Title V Air Operating Permit Requirements. Consult the site permit for reporting requirements.

7.6.3 Washington State Department of Ecology Industrial Stormwater General Permit Requirements

Boeing – Auburn is subject to the Industrial Stormwater General Permit WAR000221. Consult the site permit for reporting requirements. The permit is also discussed in section 7.1.4.

8.0 POST-INCIDENT FOLLOWUP

Some releases may involve post-emergency response cleanup activities. Post-emergency response is that portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun. If post-emergency response is by an employer's own employees who were part of the initial emergency response, it is considered to be part of the initial response and not post-emergency response. However, if a group of an employer's own employees, separate from the group providing initial response, performs the cleanup operation, then the separate group of employees would be considered to be performing post-emergency response and are subject to WAC 296-62-3112(11).

In accordance with the BCA community-right-to-know Emergency Response Plans, when an extremely hazardous substance has been released, the municipal Fire Department will be contacted. If the municipal Fire Department determines their presence is necessary they will respond to the Boeing Auburn facility. Upon their arrival they and the Boeing Emergency Responders will form a Unified Command. When there is no longer an immediate threat to life and safety, the municipal Incident Commander will relinquish the command post to the Boeing Incident Commander (IC). The IC, in coordination with EHS and FAM and any responding emergency service agencies, will determine when it is safe to re-enter the area. Before operations are resumed after an emergency, the logistics officer will ensure that all emergency equipment is again fit for its intended use. Site activities resume only after the IC provides authorization. The Site ERC will perform any post-incident regulatory notification.

8.1 Prevention of Recurrence

The IC will implement necessary steps so that a release, fire, or explosion involving dangerous waste, dangerous waste constituents or threatening to involve dangerous waste or dangerous waste constituents, does not occur, recur, or spread to other locations at the plant after the initial incident. Procedures to prevent recurrence may include:

- **Controlled Access**. Entry into the incident area is limited to authorized and trained personnel as needed. Potentially, entry into the incident area will be authorized for the following personnel: Fire Protection, Security, Health and Safety, Environmental, FAM, and other agency representatives or response personnel.
- **Inspection**. Processes and operations that can endanger emergency response activities are monitored for leaks, pressure buildup, and gas generation. Containers, valves, pipes, and other

equipment are inspected for leaks and other deficiencies. Buildings affected by fire are cordoned off to allow for a post-fire inspection.

- **Isolation**. Dangerous substances are isolated or removed to prevent reactions resulting from heat, fire, and contact with incompatible wastes.
- **Engineering Controls**. Processes or equipment may be redesigned or equipped to eliminate the source of the hazard.

Other departments that may assist the IC in preventing recurrence include Fire Protection, Security, FAM, and EHS, as necessary.

8.2 Reports and Record Keeping

Post-incident notification and reporting to regulatory agencies is typically the responsibility of the Emergency Response Coordinator for Environmental or designee within Environmental.

Please refer to Section 7 reporting requirements.

8.3 Maintenance of Emergency Equipment and Supplies

Before operations are resumed after an emergency incident, all emergency equipment will be inspected to ensure that it is fit for its intended use. Equipment maintenance and restocking of supplies used for emergency response activities is conducted by FAM, Boeing Fire and Environmental.

9.0 PERSONNEL TRAINING

Please review the Auburn Site Hazardous Waste Training Plan for training requirements associated with dangerous waste management activities. Responsibility for compliance with requirements is delegated to managers or supervisors.

9.1 Dangerous Waste Handling

All personnel who handle hazardous materials and could generate waste are required to take an annual Hazardous Waste 90 Day/HazCom training course. This course provides general familiarization on what is a hazardous waste and how it should be properly handled.

Personnel who are assigned responsibility for managing or handling dangerous waste, including, but not limited to, labeling of containers and inspection of accumulation areas are trained in accordance with WAC 173-303-330. The training program consists of an on-line training course, with an examination to verify understanding of the course material. All CMS employees and supervisors, plumbers who participate in bulk transfer of hazardous waste, wastewater pretreatment plant operators, and drumyard personnel must complete this hazardous waste management training course annually.

Employees requiring dangerous waste training complete training within six months of hire or transfer. Untrained employees are supervised until the required training is completed. When the training program is completed, training records and dates are maintained in Total Access.

9.2 Training for Emergency Response

Boeing personnel assigned to respond to "emergency response operations for releases, or substantial threats of releases of, hazardous substances without regard to the location of the hazard" are trained in accordance with Washington State Hazardous Waste Operations and Emergency Response Standards (ERS) [WAC296-62-300(1)(e)].

9.3 Hazmat Training

The Auburn Site has established a Hazardous Materials Emergency Response (Hazmat) Team. Members of the Hazmat Team complete a 40-hour Hazmat Technician course. This course is modeled on the requirements of 29CFR1910.120(q) WAC 196-824. The training class provides both classroom and hands-on instruction. Additionally, a minimum of 8-hours of advanced/refresher training is conducted annually. Employees are trained according to WDOSH Hazard Communication Program requirements.

The Hazmat response team must have initial training and annual refresher courses as outlined under 296-824 WAC, Emergency Response Rule, of the Washington General Occupational Health Standards.

Hazmat personnel handling or managing dangerous wastes are trained in accordance with Washington State Department of Ecology Dangerous Waste personnel training requirements (WAC 173-303-330).

9.4 Annual Hazmat Refresher Training

Annual Hazmat refresher training is conducted by internal and external sources and often includes on the job training.

9.5 Employee Training Records Retention

Hazmat training records documenting the training completed by each employee are found in Total Access 5
6

10.0 COMPREHENSIVE CONTINGENCY PLAN AUTHORIZATION TO COMMIT RESOURCES

THE AUBURN SITE CERTIFICATE OF AUTHORITY FOR EMERGENCY COORDINATOR for Environmental TO COMMIT company RESOURCES

As required by the Washington State Dangerous Waste Regulations, paragraph 173-303-360(1), I hereby certify that the individual(s) designated as the Site Emergency Response Coordinator for Environmental or their designee in this Contingency Plan, has the authority to commit Boeing resources as needed to carry out the Auburn Site Comprehensive Contingency Plan.

Signature: _____

Jack Meehan
Auburn Site Leader

Date: 1/2/18

Signature: _____

Danny P. Miller
Auburn/Frederickson FAM Leader

Date: 1/22/18

Signature: _____

Cari A. Schermacher
Auburn/Frederickson Fire and Security

Date: 1/18/18

11.0 CHEMICAL LIST

11.1 Chemical Storage

A list of chemicals and chemical storage and use locations at Auburn Site is maintained on file by Environmental. Due to the size of the chemical database for Auburn Site, a complete list of chemicals is not provided in this CCP. However, Table 11-1 contains a list of the SARA Title III, Extremely Hazardous Substances (40 CFR Part 355, Appendix A) found at Auburn Site, as well as the locations of these substances. Actual quantities of chemicals stored will vary due to specific demands, chemical depletion, or replenishment of stored stock.

In an emergency, contact the Boeing Fire Emergency Dispatcher immediately. Information not maintained in this CCP or at the incident location will then be provided.

Table 11-1
Extremely Hazardous Substances

CAS #	Chemical	Location
7664417	AMMONIA	17-04:N, 17-10, 17-10:E, 17-45: NE, 17-45: NE, 17-45: SE, 17-62: N,S, 17-66@NE (Ammonia: Chiller system)
7664393	HYDRO-FLUORIC ACID	17-06:N, 17-06@NW: Anodize line (TNA-14), 17-06@NW: Penetrant line (TNP-04), 17-07:N, 17-07@SW: E line (E-07), 17-07@SW: G line (G-07), 17-07@SW: J line (J-06), 17-08@F7-H5 (Aqueous Degrs/D5), 17-08@S: A Line (A-04), 17-08@S: A Line (A-17), 17-08@S: C Line (C-02), 17-08@S: D Line (D-04), 17-08@TNKLI (Aqueous Degrs/D-04), 17-45:N, 17-45@NE: A/A line (A/A-07), 17-45@NE: A/A line (A/A-13), 17-45@NE: A/A line (A/A-24), 17-45@NE: A/A line (A/A-27), 17-62:N,S, 17-62:N,S, 17-62@W: Al clean (N) line (N-05), 17-62@W: Al clean (N) line (N-09), 17-62@W: Hard metals (R) line (R-08A), 17-66:Bay E, 17-68: N,S, 17-68: N,S, 17-68:S,W, 17-68@W: Aluminum line (L-09), 17-68@W: Hard metals line (M-08)
7697372	NITRIC ACID	17-06:N, 17-06@NW: Anodize line (TNA-14), 17-06@NW: Penetrant line (TNP-04), 17-07:N, 17-07@SW: E line (E-07), 17-07@SW: G line (G-04), 17-07@SW: G line (G-07), 17-07@SW: H line (H-07), 17-07@SW: J line (J-06), 17-08@F7-H5 (Aqueous Degrs/D5), 17-08@S: A Line (A-04), 17-08@S: C Line (C-02), 17-08@S: D Line (D-04), 17-08@S: E Line (E-06), 17-08@S: E Line (E-07), 17-08@S: E Line (E-08), 17-08@TNKLI (Aqueous Degrs/D-04), 17-10:E, 17-45:N, 17-45:NW, 17-45@NE: A/A line (A/A-07), 17-45@NE: A/A line (A/A-13), 17-45@NE: A/A line (A/A-24), 17-45@NE: A/A line (A/A-27), 17-62:N,S, 17-62@W: Al clean (N) line (N-05), 17-62@W: Al clean (N) line (N-09), 17-62@W: Dip braze (Q) line (Q-03), 17-62@W: Hard metals (R) line (R-08A), 17-62@W: Hard metals (R) line (R-15), 17-66:Bay E, 17-68: N,S, 17-68:S,W, 17-68@W: Aluminum line (L-09), 17-68@W: Hard metals line (M-08), 17-68@W: Hard metals line (M-10), 17-68@W: Hard metals line (M-11)
7664939	SULFURIC ACID	17-06:N, 17-06@NW: Anodize line (TNA-14), 17-06@NW: Anodize line (TNA-19), 17-06@NW: Penetrant line (TNP-04), 17-07:N, 17-07@SW: J line (J-09), 17-08@S: A Line (A-04), 17-08@S: A Line (A-08), 17-08@S: A Line (A-17), 17-08@S: A Line (A-18), 17-08@S: B Line (B-06), 17-08@S: D Line (D-04), 17-15@Ext-S (Misc. Tanks/6), 17-45:N, 17-45@NE: A/A line (A/A-18), 17-45@NE: A/A line (A/A-19), 17-62:N,S, 17-62:S, 17-62@C14 (Misc. Tanks), 17-62@C2 (Misc. Tanks), 17-66:Bay E, 17-68: N,S, 17-68@W: Aluminum line (L-13), 17-68@W: Hard metals line (M-19),

11.2 Transportation Routes

Hazardous substances that are transported to and from the Auburn Site Facility arrive and exit from Security Gate A-4 located off of Perimeter Road. Highway 167, located west of the Auburn Site, is directly accessible via 15th Avenue Southwest.

12.0 EQUIPMENT LIST

A list of emergency equipment is provided in Table 12-1 of this section. This equipment enables site personnel to react and respond to reasonably foreseeable emergency incidents. A description of each item of equipment is contained in the following subsections. In the event that adequate emergency equipment is not available onsite, supplemental emergency equipment is available from outside sources and local emergency response agencies. Emergency assistance from local emergency response organizations is initiatedby the IC through the Security/Fire Dispatcher.

This section also provides a summary of BCA Fabrication's internal and external communication systems, testing and maintenance policy, and aisle space requirements.

12.1 Description of Equipment

12.1.1 Fire Extinguishing and Prevention Systems

Fire extinguishing and prevention equipment at Boeing Auburn site consists of portable extinguishers, monitored automatic fire protection sprinkler systems, electrical grounding devices, fire hydrants, loop fire mains, and fire department equipment. The primary method of fighting fires at Boeing Auburn is via the on-site Fire Deparment. A full-time trained fire fighting staff, equipped with fire trucks and other firefighting equipment is located centrally in the 17-16 Building.

To prevent buildup and discharge of static electricity, metal containers and metal sheds used for accumulation of flammable wastes are electrically grounded.

12.1.2 Spill Control Equipment

Spill control equipment and supplies used at Auburn Site includes containment equipment, absorbents, an emergency response vehicle, and portable vacuum tankers. In addition, a dangerous waste container storage and accumulation areas which are outside are constructed with secondary containment structures (grated sumps and floor trenches) designed to collect spills. A supply of absorbent materials is maintained at the drumyard for containment and cleanup of small spills.

In addition to spill control equipment, the Boeing Fire Department Special Operations Truck contains protective clothing, self-contained breathing apparatus, and other personal protection equipment. Boeing Auburn also maintains portable tankers with pumping equipment that can be used to collect large liquid spills. An inventory list is maintained for the Special Operations Vehicle to aid in maintenance and resupply of equipment as necessary. The inventory list is checked weekly by Fire Department staff.

12.1.3 Atmosphere Dispersion and Testing Equipment

The Boeing Auburn Fire Department maintains smoke evacuator fans for removal and dispersal of air contaminants that may occur at the Auburn Site. The fans are electrically powered and have approximately 500 cubic feet per minute capacity.

Equipment for identifying known or potential air contaminants is available within FAM and EHS organizations. The type and capabilities of this equipment are summarized in this section.

12.1.4 Decontamination Equipment

A steam cleaner is available for cleaning equipment. Additional decontamination equipment, such as detergents and personal protective equipment (PPE), are located throughout the site and on the special operations vehicle

Table 12-1

AUBURN SITE
PREVENTION AND EMERGENCY EQUIPMENT

Equipment	Capabilities	Locations
FIRE EXTINGUISHING AND PREVENTION SYSTEMS		
Automatic sprinklers	Heat-sensitive water sprinklers for structural fires.	Throughout site, controlled by Boeing Fire.
Hydrants, hoses, loop fire mains	Control and extinguish large structure fires.	Throughout site, controlled by Boeing Fire.
Boeing Auburn Fire Dept.	Structural, aircraft, chemical, and fuel oil fires.	Building 17-16
SPILL CONTROL EQUIPMENT		
Berms, sumps, and floor trenches	Contain and collect liquid spills.	Throughout site
Sorbents	Solidify liquid spills.	Throughout site, 17-32 building.
Spill emergency kit. Also contains personal safety equipment (clothing and respiratory protection)	Clean up any liquid or solid spills. Protect the health and safety of personnel involved in regulated waste cleanup activities.	Boeing Fire Department Special Operations Truck (17-16) and throughout site;

Table 12-1 (CONT.)
AUBURN SITE
PREVENTION AND EMERGENCY EQUIPMENT

Equipment	Capabilities	Locations
SPILL CONTROL EQUIPMENT (CONT.)		
Spill Kits	To contain and control any liquid spills.	Buildings: 17-04; 17-06; 17-07; 17-08; 17-15; 17-45; 17-62; 17-66; 17-68
Portable Sump Suckers	Clean up any type of liquid material up to 1,500 gallons, e.g., acids, caustics, oils.	17-32, 17-15, 17-07, 17-10
Spill Carts	Clean up small spills.	Outside buildings 17-06, 17-12, 17-15, 17-62, 17-64, & 17-66
Empty drums	Contain released wastes, contaminated absorbents, clothing, and rags.	Building 17-32
ATMOSPHERE DISPERSION AND TESTING EQUIPMENT		
Smoke evacuator fans	Removal and dispersion of dangerous atmospheres.	Building 17-16
Detector tubes	Quantify atmospheres with acidic, alkaline, plastic, and resin constituents.	Boeing Fire Department Special Operations Truck Building 17-16 Industrial Hygiene 17-45
Mercury Detector	Quantify mercury contaminated atmospheres.	Industrial Hygiene 17-45
Portable Direct Reading Gas Detector (5-gas meter)	Quantify atmospheres with volatile solvent, fuels, and LP gas constituents.	Boeing Fire Department Special Operations Truck Building 17-16 Industrial Hygiene 17-45
Oxygen detector	Quantify oxygen deficient atmospheres.	Boeing Fire Department Special Operations Truck Building 17-16 Industrial Hygiene 17-45
DECONTAMINATION EQUIPMENT		
Steam clean	Remove oils from equipment.	Building 17-38
HAZARDOUS MATERIALS (HAZMAT) RESPONSE EQUIPMENT		
Boeing Fire Department Special Operations Truck	Will respond to hazardous incidents throughout Auburn Site. Holds all essential emergency equipment.	17-16 Building
Personal protective clothing	Levels A, B, and C protective clothing allows entry into hazardous environments.	Boeing Fire Department Special Operations Truck Building 17-16
Self-contained breathing apparatus	Used in Level A or B hazardous situations.	Boeing Fire Department Special Operations Truck Building 17-16
Emergency Operations Center (EOC)	Used in a large emergency incident that requires additional support beyond the incident command staff.	17-70 Building Mobile EOC west of the 17-70+ Building

12.2 Internal Communication

BCA communication systems consist of the following:

- Telephones/cell phones
- Portable and vehicle two-way voice radios
- Master paging systems
- Desktop Emergency Computer Notification System (DENS)
- Word of mouth

Telephones and cell phones are located throughout the Auburn Site and serve as the primary means of communication among employees, Fabrication emergency response organizations, and outside emergency response organizations. Boeing Auburn Site personnel have access to the telephone system and are trained in its use for emergency notification.

Many Auburn Site personnel have access to cell phones. Additionally, portable radios are used for direct communication among key personnel at the scene of an emergency. Auburn Site hazmat personnel can be paged with a text message.

The Desktop Emergency Computer Notification (DENS) System allows IC to broadcast information to Boeingpersonnel within the buildings through their computer. This system serves as the initial means of conveying evacuation instructions in the event of an emergency.

12.3 External Communication Systems

When external assistance is required, the telephone system is the primary method for summoning emergency assistance from local emergency response organizations. The IC initiates this contact directly or through the Security/Fire Dispatcher, using the 911 emergency telephone networks. This 911 emergency call number expedites emergency response by fire, police, and medical assistance authorities. In situations where telephone is not a viable method, Ham radios are a backup method for sending and receiving communication.

12.4 Testing and Maintenance of Equipment

The communication system, fire protection equipment, and spill control equipment are inspected, tested, and maintained to enable proper operation during an emergency. The frequency of scheduled testing and maintenance varies, depending on the role and reliability of the individual equipment. Testing, maintenance, and inspection procedures and schedules are kept by FAM and Boeing Fire. Preventive Maintenance documents (PMs) are also maintained by FAM.

12.5 Aisle Space

Fire lanes are maintained to allow the unobstructed movement of personnel and fire protection equipment, spill control equipment, and decontamination equipment to areas of the site where emergency access may be required.

Aisle spaces are maintained in the hazardous material storage areas, and dangerous waste accumulation areas as required by WAC 173-303, to permit inspection of containers, labels, and containment structures. Flammable and combustible materials and wastes are stored according to Uniform Fire Code (UFC) WAC 173-303-630(5) (C) requirements and maintain the requirement of 30 inches of aisle space.

13.0 TELEPH0NE LIST

Table 13-1

AUBURN SITE INCIDENT SUPPORT PERSONNEL				
	Name	**Phone**	**Pager**	**Cellular**
SITE EMERGENCY RESPONSE COORDINATORS FOR ENVIRONMENTAL				
Primary	Tessa Higgins	360-509-2124	360-509-2124	360-509-2124
Alternate	Jim Swortz	360-790-1767	360-790-1767	360-790-1767
Alternate	Peter Weickmann	253-951-6771	253-951-6771	253-951-6771
Alternate	John Sherman	253-218-5053	253-218-5053	253-218-5053
Alternate	Terry Tomt	253-304-2979	253-304-2979	253-304-2979
Secondary Alternate	EHS On-Call Phone	253-259-1254	N/A	253-259-1254
SITE INCIDENT COMMANDER				
Primary	Paul Spirup, Site Deputy Chief	253-657-2690	24 hour Emergency, 206-655-2222	206-713-4376
Alternate	On-Duty Fire Officer	253-657-2677	24 hour Emergency, 206-655-2222	N/A
SECURITY				
Primary	Dispatch	24 hour Emergency, 206-655-2222	N/A	N/A
Secondary	Jeff Cassell	425-306-5186	425-306-5186	425-306-5186
ENVIRONMENTAL				
Primary	Tessa Higgins	360-509-2124	360-509-2124	360-509-2124
Alternate	Jim Swortz	360-790-1767	360-790-1767	360-790-1767
Alternate	Peter Weickmann	253-951-6771	253-951-6771	253-951-6771
Alternate	Terry Tomt	253-304-2979	253-304-2979	253-304-2979
Manager	John Sherman	253-218-5053	253-218-5053	253-218-5053
HEALTH AND SAFETY				
Primary	Cory Cranston	206-465-7480	206-465-7480	206-465-7480
Secondary	Aiza Villarin	253-657-3752	253-241-5908	253-241-5908
FACILITIES ASSET MANAGEMENT (FAM)				
Primary	Tillotson, Douglas R	253-657-1906	206-930-0647	206-930-0647
ENTERPRISE EHS HAZARDOUS WASTE MANAGEMENT				
Primary	Roberto Manipis	425-237-1933	206-650-6648	206-650-6648
MEDICAL				
Auburn Site		253-657-1660	24 hour Emergency, 206-655-2222	N/A
FABRICATION COMMUNICATIONS				
24 Hour Support		206-304-8114		
HAZMAT - TECHNICAL SUPPORT				
Alternate	Roger Wheeler	253-657-2677	253-657-2677	N/A
Alternate	Paul Spirup, Site Deputy Chief	253-657-2690	24 hour Emergency, 206-655-2222	206-713-4376
Alternate	Tessa Higgins	360-509-2124	360-509-2124	360-509-2124

Table 13-2

AUBURN SITE OFFSITE EMERGENCY CONTACTS	
Contact	**Phone**
OFFSITE FIRE DEPARTMENTS	
Valley Regional Fire Department - Station 33 2905 C Street S.W., Auburn, WA 98002	911 253-288-2121 253-288-5800 office
OFFSITE POLICE DEPARTMENTS	
City of Auburn Police Department	911 253-876-1925 253-298-2121 253-833-2897 (city hall)
King County Police Department	911 206-296-3311 206-296-4155 office
Washington State Patrol	911
HOSPITALS	
Auburn Regional Medical Center 202 North Division St., Auburn, WA 98001	253-833-7711
Harborview Medical Center 325 Ninth Avenue, Seattle, WA 98104	206-744-3000 206-744-3074 emergency
OFFSITE HAZMAT TEAMS	
Valley Regional Fire Authority	911
EMERGENCY PLANNING COMMISSIONS	
Washington Emergency Management Division	1-800-258-5990
King County Office of Emergency Management (LEPC)	206-296-3830
Pierce County Office of Emergency Management (LEPC)	253-798-6595
EMERGENCY REGULATORY AGENCIES AND RESPONSE ORGANIZATION	
Washington State Department of Ecology - Bellevue Office	425-649-7000
National Response Center	1-800-424-8802
EPA Region X RCRA Office	1-800-424-4EPA 206-553-1263 (spill)
U.S. Coast Guard Commanding Officer USCG Shore Maintenance	1-800-267-2100 206-220-7400
Department of Transportation Federal Motor Carrier Safety Administration	360-753-9875
FAA Office of Security and Hazardous Material Safety	425-227-2000
South Treatment Plant; Wastewater treatment system, Renton King County Wastewater Emergency Hotline for Sewer Overflows - 24-hour phone number	206-684-2404 206-684-2400 (admin.) 206-684-2404
PSCAA	206-343-8800 1-800-552-3565

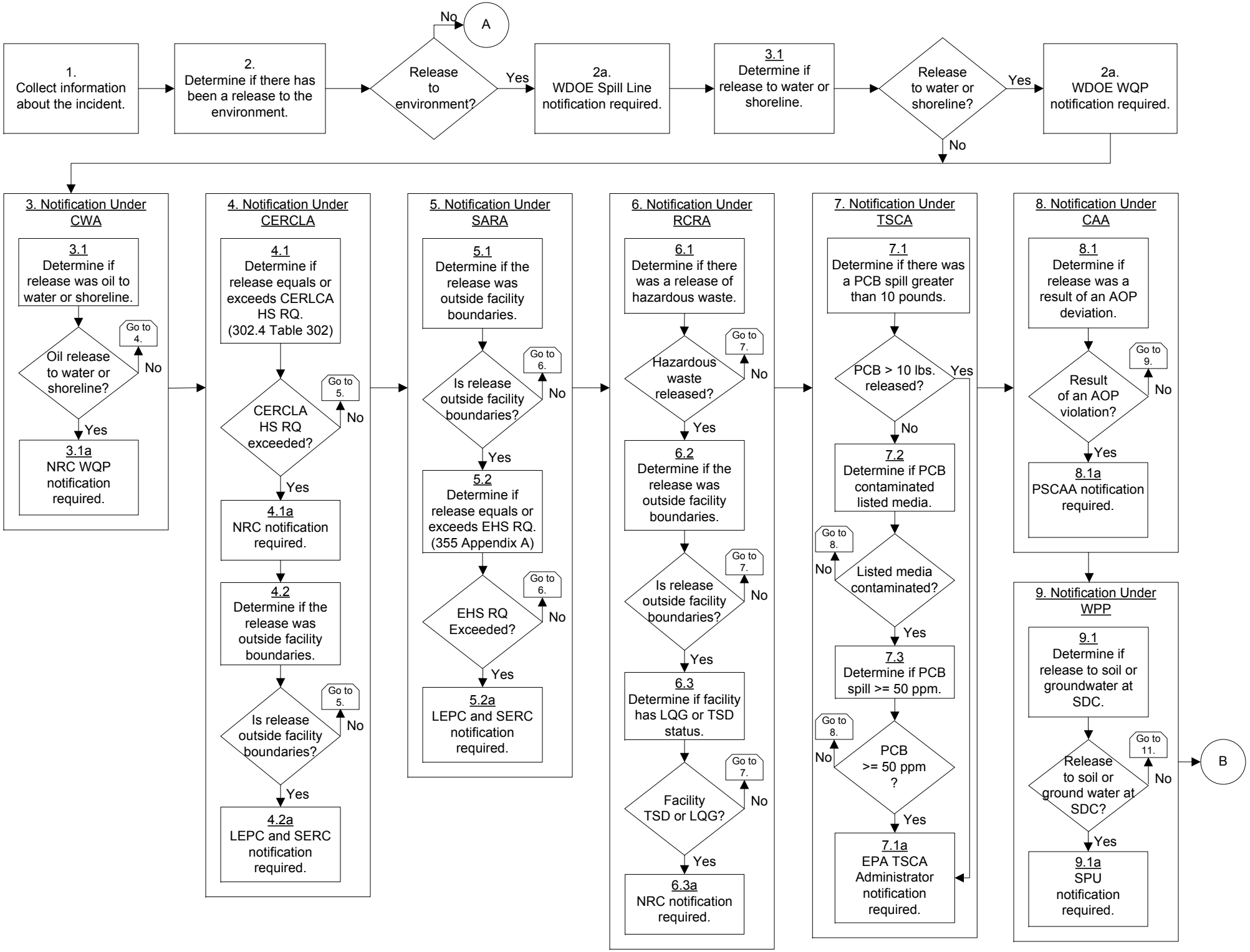
Table 13-2, cont.

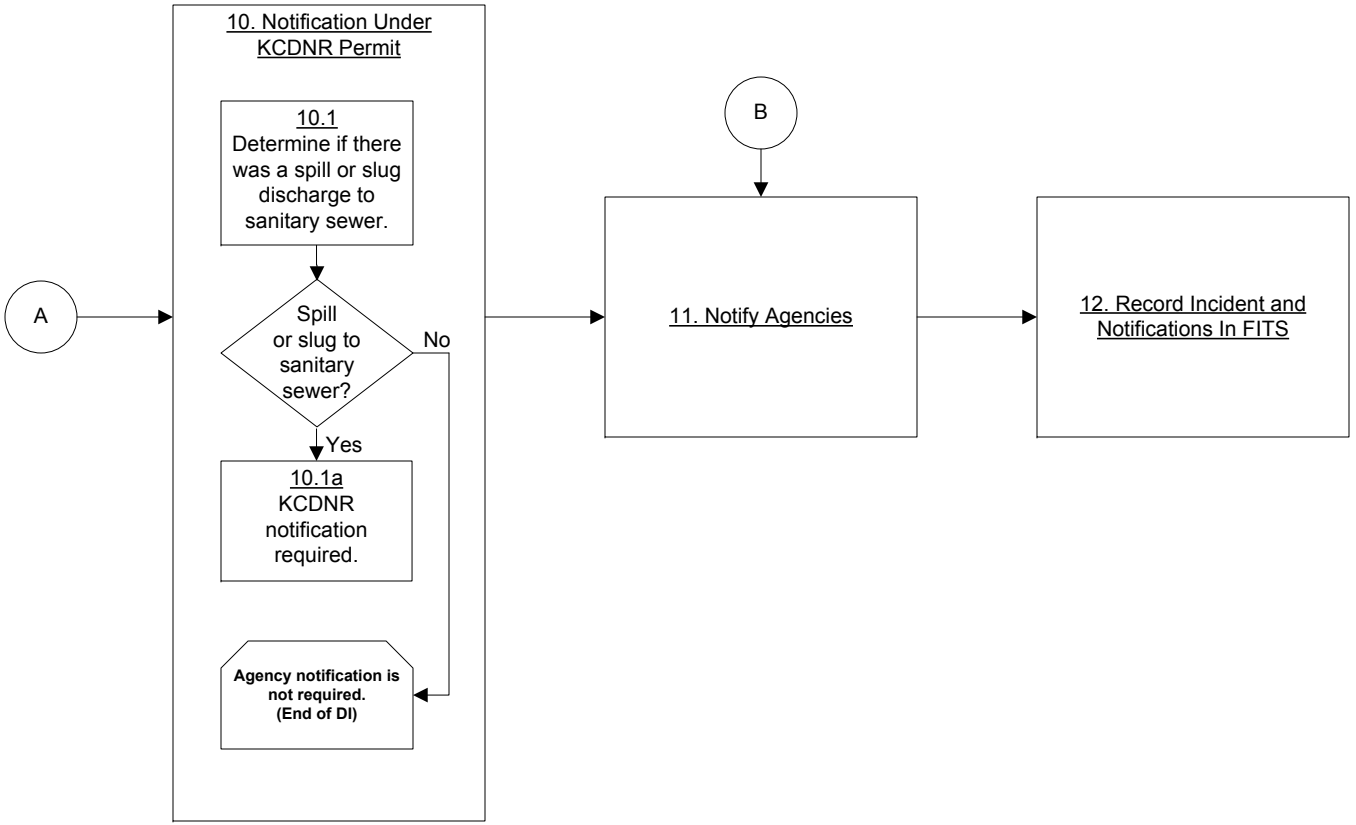
NEIGHBORING BUSINESSES (IN CASE THEY ARE AFFECTED BY AN EMERGENCY)	
Burlington Northern San Francisco Railroad (BNSF) Thomas Jubile, Roadmaster	Office: 253-597-2563 Cell: 209-954-6740
Union Pacific Railroad (UPRR)	360-5414-9717
OHL (Part of AMB) Mike Green, Director of Operations	Office: 253-735-7009 Cell: 253-720-3052
Holman Distributors (Part of AMB) Jason Pettit, General Manager	Office: 253-351-2200 Cell: 253-370-7874
Safeway Jim Venterr	Cell: 206-445-8369
GSA Denise Boyd	Office: 253-931-7961 Cell: 206-409-7070
City of Auburn	911
City of Algona	911 / 253-883-2897
City of Pacific	911 / 253-929-1130
HAZARDOUS WASTE DISPOSAL FACILITIES (AND CLEANUP VENDORS)	
Stericycle Dispatch	253-383-3044
Stericycle Jim Nobel, Primary Jeff Wells, Secondary Jason Bissenas, Alternate 1701 East Alexander Avenue Tacoma, Washington 98421	Jim (1) - 253-293-6521 Jeff (2) – 253-377-0521 Jason (Alt) – 253-293-0045
Clean Harbors Kevin Lundberg, Boeing contact	206-429-9100

14.0 LIST OF ACRONYMS

BCA	Boeing Commercial Airplane
CCP	Comprehensive Contingency Plan
CERCLA	Comprehensive Environmental Response Compensation and Liability Act (Superfund)
CRTK	Community Right-to-Know
DENS	Desktop Emergency Notification System
DOT	Department of Transportation
Ecology	Washington State Department of Ecology
EHS	Extremely Hazardous Substances
EmP	Emergency Preparedness Focal
EP	Extraction Procedure
EPA	U.S. Environmental Protection Agency
ERC	Emergency Response Coordinator for Environmental
ERP	Emergency Response Plan
ERS	Emergency Response Standards
FAM	Facilites Asset Management (formerly Site Services)
FEC	Facilities Emergency Coordinator
HAZMAT	Hazardous Materials Emergency Response Team
HMTA	Hazardous Materials Transportation Act
HSWA	Hazardous and Solid Waste Amendments
JSA	Job Safety Analysis
KCDNR	King County Department of Natural Resources
IC	Incident Commander
LEPC	Local Emergency Planning Committee
LESPAC	Local Emergency Services Planning and Advisory Committee
MBU	Manufacturing Business Unit
NOC	Notice of Construction
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
OJT	On-the-Job Training
PCB	Polychlorinated Biphenyl
PPE	Personal Protective Equipment
PSCAA	Puget Sound Clean Air Agency
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SCBA	Self-Contained Breathing Apparatus
SERC	State Emergency Response Commission
EHS	Environment, Safety, and Health
SPCC	Spill Prevention, Control, and Countermeasure
TSCA	Toxic Substance Control Act
TSDF	Treatment, Storage, or Disposal Facility
UFC	Uniform Fire Code

UST	Underground Storage Tank
WAC	Washington State Administrative Code
WA-DOT	Washington Department of Transportation
WDOE	Washington State Department of Ecology
WISHA	Washington State Industrial Safety and Health Administration
WPCL	Water Pollution Control Law


1.
Collect information about the incident.
2.
Determine if there has been a release to the environment.
Release to environment?
No
A
Yes
2a.
WDOE Spill Line notification required.
3.1
Determine if release to water or shoreline.
Release to water or shoreline?
Yes
No
2a.
WDOE WQP notification required.
3. Notification Under CWA
3.1
Determine if release was oil to water or shoreline.
Oil release to water or shoreline?
Go to 4.
No
Yes
3.1a
NRC WQP notification required.
4. Notification Under CERCLA
4.1
Determine if release equals or exceeds CERLCA HS RQ. (302.4 Table 302)
CERCLA HS RQ exceeded?
Go to 5.
No
Yes
4.1a
NRC notification required.
4.2
Determine if the release was outside facility boundaries.
Is release outside facility boundaries?
Go to 5.
No
Yes
4.2a
LEPC and SERC notification required.
5. Notification Under SARA
5.1
Determine if the release was outside facility boundaries.
Is release outside facility boundaries?
Go to 6.
No
Yes
5.2
Determine if release equals or exceeds EHS RQ. (355 Appendix A)
EHS RQ Exceeded?
Go to 6.
No
Yes
5.2a
LEPC and SERC notification required.
6. Notification Under RCRA
6.1
Determine if there was a release of hazardous waste.
Hazardous waste released?
Go to 7.
No
Yes
6.2
Determine if the release was outside facility boundaries.
Is release outside facility boundaries?
Go to 7.
No
Yes
6.3
Determine if facility has LQG or TSD status.
Facility TSD or LQG?
Go to 7.
No
Yes
6.3a
NRC notification required.
7. Notification Under TSCA
7.1
Determine if there was a PCB spill greater than 10 pounds.
PCB > 10 lbs. released?
Yes
No
7.2
Determine if PCB contaminated listed media.
Listed media contaminated?
Go to 8.
No
Yes
7.3
Determine if PCB spill >= 50 ppm.
PCB >= 50 ppm ?
Go to 8.
No
Yes
7.1a
EPA TSCA Administrator notification required.
8. Notification Under CAA
8.1
Determine if release was a result of an AOP deviation.
Result of an AOP violation?
Go to 9.
No
Yes
8.1a
PSCAA notification required.
9. Notification Under WPP
9.1
Determine if release to soil or groundwater at SDC.
Release to soil or ground water at SDC?
Go to 11.
No
Yes
9.1a
SPU notification required.
B


10. Notification Under KCDNR Permit
10.1 Determine if there was a spill or slug discharge to sanitary sewer.
A
Spill or slug to sanitary sewer?
No
Yes
10.1a KCDNR notification required.
Agency notification is not required. (End of DI)
B
11. Notify Agencies
12. Record Incident and Notifications In FITS

Letter of Credit

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

April 2, 2018

Ms. Donna Singh
Bank of Tokyo-Mitsubishi UFJ
New York Branch
1251 Avenue of the Americas
New York, NY 10020

Re: Irrevocable Standby Letter of Credit No. S502460N Amendment No. 4
Approval of Amendment

Dear Ms. Singh:

Enclosed is our signed acceptance of the above-referenced amendment. Please forward the original amendment to us at your earliest convenience so that we may attach it to the original letter of credit. If you have any questions, please call me at (360) 407-6754 or send me an email at kimberly.goetz@ecy.wa.gov. Thank you for your attention to this matter.

Sincerely,

Kimberly Goetz
Financial Assurance Officer

Enclosure

cc: John L. Gentry, Boeing

Bank of Tokyo-Mitsubishi UFJ

New York Branch
1251 Avenue of the Americas
New York, NY 10020
Tel: 201-413-8635
Fax: 201-521-2312
SWIFT: BOTKUS33XXX

Irrevocable Standby Letter of Credit No. S502460N

Amendment no. 4
Dated March 27, 2018

Beneficiary:
WASHINGTON STATE DEPARTMENT
OF ECOLOGY
P.O. BOX 47600
OLYMPIA, WA 98504-7600 United States

Applicant:
The Boeing Company
2201 Seal Beach Blvd
Seal Beach,, CA 90740 United States

We amend our Standby Letter of Credit subject to the following terms and conditions. This amendment forms an integral part of the original instrument. All other terms and conditions remain unchanged.

Amended Terms:

The amount of the Standby Letter of Credit is decreased by: USD 8,165,000.00 to USD 845,000.00

Unless otherwise instructed herein, all correspondence and inquiries regarding this transaction should be directed to our International Operations Department at Harborside 3, 210 Hudson Street, Suite 500, Jersey City, NJ 07311, United States, telephone: 1-201-413-8145 or 1-201-413-8823. Please indicate our reference number in all your correspondence or telephone inquiries.

Your consent to this amendment is required. Please immediately forward such written consent to Bank of Tokyo-Mitsubishi UFJ, Ltd, Harborside 3, 210 Hudson Street, Suite 500, Jersey City, NJ 07311 quoting our reference number.

Regards,

Donna Singh
Authorized Signature(s)

Donna Singh

MUFG **Bank of Tokyo-Mitsubishi UFJ**

Our Reference No.: S502460N
Amendment No. 4

Please sign and fax a copy of this advice indicating one of the following:

(X) We agree to the foregoing amendment in its entirety.
( ) We do not agree to the foregoing amendment in its entirety.

Kimberly Goetz — April 2, 2018
Beneficiary Signature — Date

Kimberly Goetz, Financial Assurance Officer — (360) 407-6754
Printed Name — Telephone No.