USPS - Gen. Mail Facility
SIT 3.6.7

PHASE I ENVIRONMENTAL SITE ASSESSMENT
UNITED STATES POSTAL SERVICE

FORMER GENERAL MAIL FACILITY
2445 3RD AVENUE SOUTH
SEATTLE, WASHINGTON 98134

Prepared for

Ms. Roberta Willis
United States Postal Service
Denver Facilities Service Office
8055 East Tufts Avenue, Suite 400
Denver, Colorado 80237-2881

Contract No. 072976-95-B-0015
Work Order No. 451.01
Project No. E23887

ICF KAISER

October 15, 1997

ICF KAISER
FEDERAL PROGRAMS GROUP

ICF Kaiser Engineers, Inc.
165 South Union Boulevard, Suite 850
Lakewood, CO 80228-2213
303/980-2000 Fax 303/980-2030
http://www.icfkaiser.com

October 15, 1997

Ms. Roberta Willis
Environmental Specialist
US Postal Service
Denver Facilities Service Office
8055 East Tufts Avenue, Suite 400
Denver, CO 80237-2881

RE: Final Phase I Environmental Site Assessment
Former General Mail Facility
Seattle, Washington

Contract No. 072976-95-B-0015
Project No. E23887
Work Order No. 451.01

Dear Roberta:

Enclosed are six (6) copies of the Final Phase I Environmental Site Assessment for the Former General Mail Facility in Seattle, Washington. This document incorporates all US Postal Service (USPS) comments on the draft report. Seven copies of this final report have also been forwarded directly to Mr. Rick Osterhout of CB Commercial in Seattle.

This Phase I report has been prepared in general accordance with the American Standard for Testing and Materials (ASTM) standard for Phase I Environmental Site Assessments and the USPS Facilities Environmental Handbook (RE-6). The completed USPS Environmental Checklist (Form 7498-D) is included as Section 8.0 of the report.

Please contact me if you have any questions regarding this report. We appreciate the opportunity to perform these services for the USPS.

Sincerely,

Ted Wilson
Project Manager

Enclosures: Six (6) final copies of the Final Phase I Environmental Site Assessment for the Former General Mail Facility in Seattle, Washington.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
ASTM	American Society for Testing and Materials
BTEX	benzene, toluene, ethylbenzene, and xylenes
CSCSL	Confirmed and Suspected Contaminated Sites List
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
GMF	General Mail Facility
HMIRS	Hazardous Materials Incident Reporting System
HRS	Hazard Ranking System
ICF KE	ICF Kaiser Engineers, Inc.
LBP	lead-based paint
LQG	large quantity generator
LUST	leaking underground storage tank
MTCA	Model Toxic Control Act
NAAQS	National Ambient Air Quality Standards
NPL	National Priority List
P&DC	Processing and Distribution Center
PAH	polyaromatic hydrocarbons
PCB	polychlorinated biphenyls
pCi/L	picoCuries per Liter
PM-10	particulate matter less than 10 microns

LIST OF ACRONYMS AND ABBREVIATIONS, CONTINUED

ppb	parts per billion
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
SACBM	suspected asbestos-containing building material
SEPA	State Environmental Protection Act
SHWS	State Hazardous Waste Site
SQG	small quantity generator
SWF/LS	Solid Waste Facilities/Landfill Sites
TPH	total petroleum hydrocarbons
TSDF	Treatment, Storage, and Disposal Facility
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
USPS	United States Postal Service
UST	underground storage tank
VMF	Vehicle Maintenance Facility
WDOE	Washington Department of Ecology

EXECUTIVE SUMMARY

In accordance with our contract with the United States Postal Service (USPS), ICF Kaiser Engineers, Inc. (ICF KE) performed an Environmental Site Assessment of the property located at 2445 3rd Avenue South in the City of Seattle, Washington (the Site). The legal description for the northern portion of the Site is Block 294, Lots 1-11, and for the southern portion is Parcel A (Seattle DCLU 1997b). The Site is approximately 12.11 acres in size and is bordered by the Burlington Northern Railroad right-of-way to the west, South Lander Street to the south, an import/export warehouse and parking lot to the north, and 3rd Avenue South to the east. The Site is owned by the USPS and is the location of the former General Mail Facility (GMF) (also known as Processing & Distribution Center (P&DC) and Terminal Annex), which consists of the empty GMF building and former Vehicle Maintenance Facility (VMF) building. The USPS is disposing of the Site and this report is intended to provide prospective buyers of the property with the environmental conditions of the Site. In addition, ICF KE performed a comprehensive review of environmental documents relating to various previous investigations on the Site.

Information for this report was obtained by conducting a database search, a site reconnaissance, local document research, and interviewing state, city, and local officials regarding the history of the Site and adjacent properties.

The following databases were searched to identify potential environmental concerns: The US Environmental Protection Agency's (USEPA's) National Priorities List (NPL); Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Facility Index System (FINDS); Resource Conservation and Recovery Information System (RCRIS); Solid Waste Facilities/Landfill Sites (SWF/LS); Emergency Response Notification System (ERNS); Hazardous Materials Incident Reporting System (HMIRS); State Hazardous Waste Site (SHWS) lists; Underground Storage Tank (UST) listings; and Leaking Underground Storage Tank (LUST) incident listings.

The results of the database searches are summarized in the following table and discussed in detail in Section 4.1.

ENVIRONMENTAL DATABASES SEARCHED	
NPL	No sites identified within radius of concern.
CERCLIS	No sites identified within radius of concern.
FINDS	1 site identified within radius of concern.
RCRIS	3 sites identified within radius of concern.
SWF/LS	1 site identified within radius of concern.
ERNS/HMIRS	No sites identified within radius of concern.
CSCSL	23 sites identified within radius of concern.
UST	3 sites identified within radius of concern.
LUST	27 sites identified within radius of concern.

Affirmative Checklist Answers and Recommendations

Eleven items were given affirmative answers on the Environmental Checklist and are discussed below:

- Question 6 - Coastal Zone Management Area: The Site is not located in the state-regulated shoreline management zone, which is defined as an area within 200 feet of the shoreline. However, the Site is located in the federal Coastal Management Zone. In order to comply with Coastal Management Zone requirements, the City of Seattle requires that a State Environmental Protection Act (SEPA) checklist, which examines the appropriateness of development in this portion of the Coastal Zone, be submitted for all development projects with a building greater than 12,000 square feet in area or with a net gain or loss of 20 parking spaces (Seattle DCLU 1997).

- Question 10 - Seismic Hazards: The Seismic Zone Map (Uniform Building Code 1988) identifies the area as being in Seismic Zone 3. Seismic zones are designated 0 to 4, with building code structural requirements generally increasing with increasing value. There are four major faults within a 40-mile radius of the Site (Rogers et al 1996). Two of the faults have had medium-level activity during the last several years and all have the potential for significant earthquake activity.

- Question 21 - Built Prior to 1980: The GMF and VMF buildings at the Site were constructed in 1954. Due to this construction date, the building contains asbestos materials, lead in paint, and some polychlorinated biphenyl (PCB)-containing ballasts. These topics are covered in detail in Sections 3.14, 3.17, and 3.18.

- Questions 22, 23, and 24 - USTs: There is one UST located on the property. The UST is a 6,000-gallon, double-walled fiberglass tank on the southwest side of the GMF building used to store diesel heating fuel. The tank was installed in 1991 and meets current regulatory standards. There has been no evidence of leakage from the storage tank. This tank is discussed further in Section 3.1 of this report. In addition, there have been at least 5 other USTs on the Site, all of which have been removed (see Section 3.1).

- Question 25 - PCBs, Asbestos-Containing Material (ACM): The Site contains PCB fluorescent light ballasts and ACM. Only a small percentage of identified ACMs are recommended to be removed. These issues are discussed in more detail in Sections 3.14 and 3.17, and in the Asbestos Survey Report - General Mail Facility, Seattle, Washington.

- Questions 26, 27, and 28 - USEPA or State Superfund or Priority Cleanup Site: The Site has had several leaks of petroleum products from USTs and hydraulic lift pits, as well as minor petroleum, lead, and PCB contamination discovered in soils at the Site. Some remedial efforts have been directed to clean up this contamination. The contamination and associated remedial efforts are discussed in more detail in Section 3.2. Because the Site is located in a highly industrialized area of Seattle, there are a number of nearby properties that are on Washington Department of Ecology's (WDOE's) list of priority cleanup locations. These properties are listed and described in more detail in Section 4.1.7. However, there is minimal information available for several of these properties. There are also several nearby properties (across 3rd Avenue South) which have been the location of remedial efforts, primarily for

petroleum leaks. These sites are listed and described in more detail in Section 4.1.7 (State Hazardous Waste Sites) and Section 4.1.8 (LUSTs).

- Question 29 - High-Risk Land Use: The Site is located in a highly industrialized area of Seattle. There are many vehicle maintenance facilities, recycling and scrap facilities, industrial storage sites, gas stations, and other potential sources of soil and ground water contamination within 1- mile of the Site. Many of these land uses would be considered high risk. A number of properties that have been confirmed as locations where hazardous materials have been released to the environment are outlined in Section 4.1.

1.0 INTRODUCTION

In accordance with our contract with the USPS, ICF KE performed an Environmental Site Assessment of the property located at 2445 3rd Avenue South in the City of Seattle, Washington (the Site). The legal description for the northern portion of the Site is Block 294, Lots 1-11, and for the southern portion is Parcel A (Seattle DCLU 1997b). The Site is approximately 12.11 acres in size and is bordered by the Burlington Northern Railroad right-of-way to the west, South Lander Street to the south, an import/export warehouse and parking lot to the north, and 3rd Avenue South to the east. The Site is owned by the USPS and is the location of the former GMF (also known as P&DC and Terminal Annex), which consists of the empty GMF building and former VMF building. The USPS is disposing of the Site and this report is intended to provide prospective buyers of the property with the environmental conditions of the Site.

This report encompasses ICF KE's limited research, review of reasonably available data and publications, and site reconnaissance to identify recognized environmental conditions in general accordance with the American Society for Testing and Materials (ASTM) Standard E1527-94. This report is prepared for the exclusive use of the USPS in the environmental assessment of the subject property.

The scope of work for this environmental assessment included:

- Preparing a Phase I Environmental Site Assessment report for the selected site per USPS guidelines; and

- Completing the Environmental Checklist, USPS Form 7498-D, for the selected site.

This Phase I environmental assessment represents a review of certain information relating to the site that was obtained from the sources and contacts by the methods described in this report. Inspection of neighboring properties was conducted from nearby publicly-owned properties and rights-of-way. Our engineering conclusions presented herein are based on the information made available to ICF KE during our investigation. While ICF KE used reasonable care to avoid reliance upon data or information that is inaccurate, ICF KE was not able to verify the accuracy or completeness of all data and information available to ICF KE. ICF KE makes no legal representation whatsoever concerning any matter including, but not limited to, ownership of any property or the interpretation of any law. ICF KE further disclaims any obligation to update the report for events taking place after the date on which we conducted our assessment.

2.0 SITE DESCRIPTION

2.1 Location and Description

The 12.11 acre Site, located at 2445 3rd Avenue South, at the northwest corner of the intersection of 3rd Avenue South and South Lander Street in the city of Seattle, is owned by the USPS (see Figure 1). The Site is the location of the former GMF (also known as P&DC and Terminal Annex), which consists of the empty GMF building and former VMF building (see Figure 1 and Section 7.0, Site Plot Plan). The legal description for the northern portion of the Site is Block 294, Lots 1-11, and for the southern portion is Parcel A (Seattle DCLU 1997b).

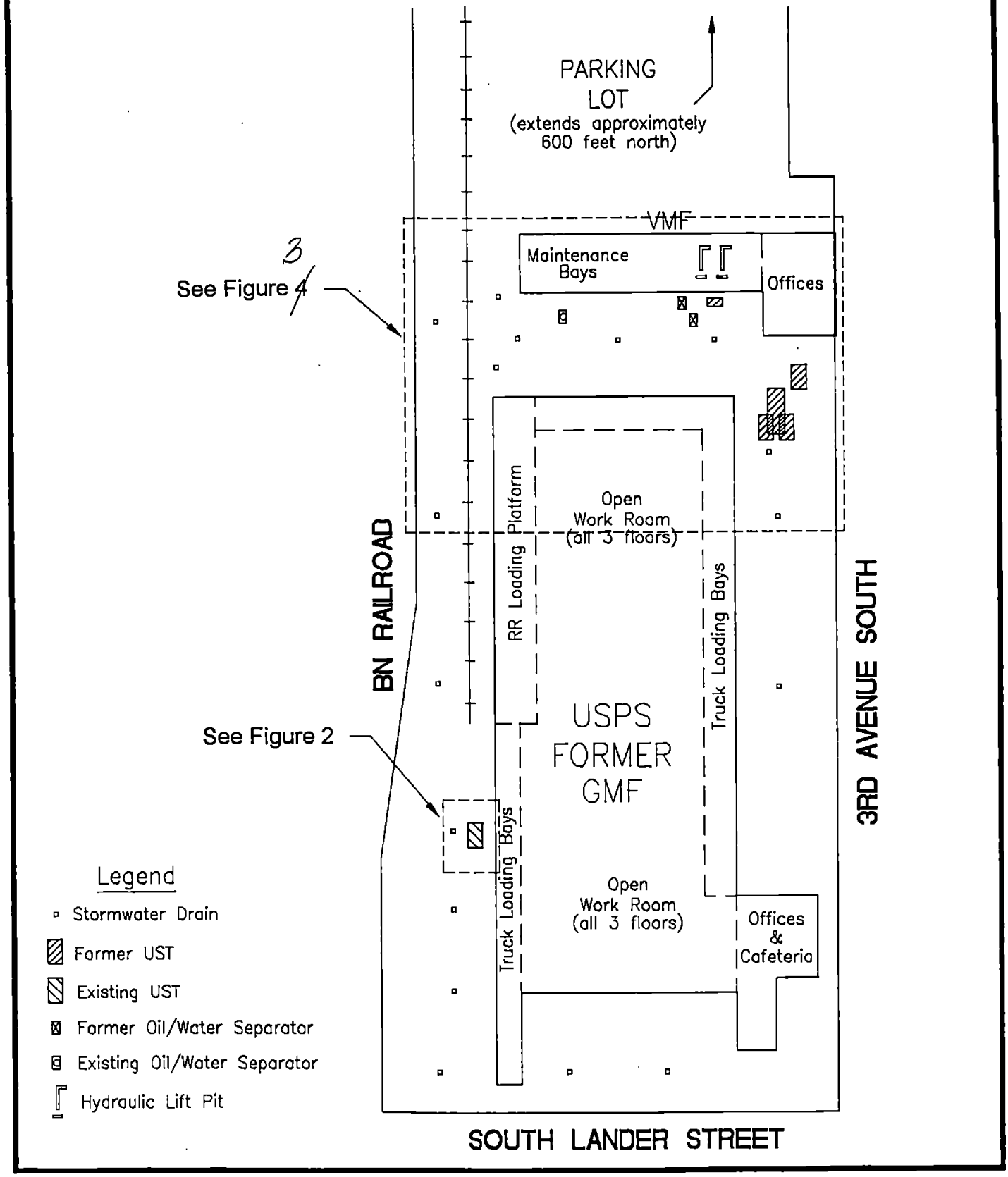
The Site is bounded by the Burlington Northern Railroad right-of-way to the west, South Lander Street to the south, an import/export warehouse and parking lot to the north, and 3rd Avenue South to the east (see Section 7.0, Site Vicinity Map). Vehicle access to the Site is currently available from several gates on the south and east sides of the property.

The Site is a long rectangular parcel that runs north-south parallel to 3rd Avenue South and the Burlington Northern right-of-way. The former GMF building is situated on the south end of the parcel. This building is roughly rectangular and consists of a 3-story concrete shell building. The southern parts of the building were used primarily for offices, while the northern end was used for mail processing. Truck-loading platforms exist on all sides of the building. A rail-loading platform on the west side of the building was used during most of the history of the building except during the last few years the building was in use. The railroad spur line that served the platform extended along the west side of the building from the adjacent Burlington Northern Railroad. The old VMF building is located northeast of the former GMF building. Repair and maintenance bays occupy the 1-story western three-quarters of the building, while offices are located in the 2-story eastern quarter of the building. Two maintenance bays near the offices at the eastern end of the building contain subsurface hydraulic lift pits and a floor drain that drains to a 550-gallon waste oil tank located just south of the VMF building. Both the GMF and VMF buildings are surrounded by asphalt and concrete-paved parking areas and driveways. These paved areas cover almost every part of the property not covered by one of the buildings.

2.2 Site and Vicinity Characteristics

The Site is located in the industrial south end of Seattle. The area surrounding the Site is a mix of commercial and industrial properties, including gas stations, fast food restaurants, retail shops, machine shops, warehouses, automobile maintenance facilities, railroad corridors, and other industrial businesses (see Section 7.0, Site Vicinity Map). Because of this location, there is a high probability that a number of hazardous spills and leaks in the vicinity of the Site have impacted ground water. The Burlington Northern railroad right-of-way, including several operational rail lines, runs along the western edge of the Site. Several other rail and transit corridors run primarily north-south within a few blocks of the Site.

The area around the Site consists of flat former tideflats and marshlands in the Duwamish River valley near where the Duwamish waterway empties into Elliott Bay. Many areas of the tideflats and marshlands, including the Site location, were built up with fill material around the turn of the century. The East Duwamish waterway, location of various piers and ship-loading terminals, lies approximately ¾-mile to the west of the Site.



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1191 Second Ave.
Seattle, WA 98101

0 100 200

APPROXIMATE SCALE IN FEET

Figure 1: Site Plan

Client:	Location:	Project:	Date:
USPS	GMF SEATTLE, WA	51701-427-00	09/20/97

SEA-FIG1

2.3 Current Uses of the Property

The approximately 12.11 acre Site is currently the location of the former GMF on the south end of the property and the former VMF to the northeast of the GMF building (see Section 7.0, Site Plot Plan). Both these buildings are currently empty and unused. The former GMF is approximately 320,500 square feet and consists of a 3-story poured concrete and concrete block L-shaped building (CB Commercial 1997). The building footprint occupies approximately 111,450 square feet. Truck bays are located on the first floor on all sides of the building and a railroad loading platform is located on the west side of the building. Offices were located in the southeast portions of the second and third floors. A cafeteria was located in the southeast portion of the first floor. The former VMF is approximately 44,000 square feet and consists of a two-story, steel frame and concrete block building. The building footprint occupies an estimated 40,000 square feet. Offices were located in the east end of the building. Repair and maintenance bays occupied the west end of the building. Most of the rest of the Site is paved with asphalt or concrete. This includes a large parking lot to the north of the old VMF.

2.4 Past Uses of the Property

Prior to 1954, the Site was partly vegetated, undeveloped land. The VMF and GMF buildings were constructed in 1954. The GMF was the primary mail collection and distribution center for the Seattle area while it was in operation. A railroad spur and loading platform on the west side of the property enabled rail shipments of mail and packages. The large number of truck loading docks on the south, east, and north sides of the building accommodated trucks delivering mail to outlying postal facilities. The VMF building was the primary postal vehicle repair facility for Seattle. There were approximately 14 maintenance bays at the facility, including a truck-painting bay and two bays equipped with below-grade hydraulic lifts.

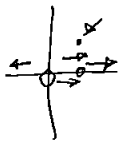
The Site was undeveloped tideflats prior to 1905. Between 1905 and 1910, the tideflats were filled in. The land sat vacant from 1905 until 1954 when the GMF and VMF buildings were constructed on the property. The USPS used these facilities until February 1997, at which time the facilities were vacated, and they are currently unoccupied. Dates are approximate.

A summary of aerial photographs, fire insurance maps, and other historical documents reviewed by ICF KE is presented in Section 4.2.

2.5 Geology and Ground Water Information

A geotechnical assessment of a nearby USPS site (the new VMF approximately 300 feet east of the Site) was conducted by Dames & Moore in 1988. During the assessment, 8 boreholes were drilled to depths of between 15 and 60 feet below ground surface. Data from these soil borings were used to identify the geology of the area. Soil borings conducted during exploratory and remedial activities at the Site (primarily Weston 1995a) confirm the general stratigraphy of the area.

The sediments underlying the Site consist of a series of glacial, river valley, and tideflat sediments covered with approximately 10 feet of fine sandy fill material at the surface. The fill material was placed soon after the turn of the century to raise the level of the tideflats that previously existed at the Site. Below the fill is approximately 10 feet of slightly sandy silt and clay with scattered organic matter. This material is tideflat sediment emplaced when this area



was a part of the Duwamish River delta emptying into Elliott Bay. At a depth of 20-25 feet below ground surface, fairly homogenous fine sands were encountered in boreholes. These sediments were probably deposited as alluvial river sediments during the last 10,000 years, grading into slightly more coarse glacial outwash sediments emplaced approximately 15,000 years ago. These homogenous sandy sediments continue to a depth of at least 55 feet.

During drilling of boreholes during remedial investigations at the Site, as well as observation of ground water levels in soil excavations, ground water was detected at depths between 5 and 8 feet below ground surface (Earth Consultants 1991a and PEMCO 1994). This corresponds to approximately 6 to 9 feet above mean sea level. Ground water flow directions were estimated to be approximately east, based on interpretation of water table elevations in monitoring wells at the Site. However, several remedial investigations at nearby properties have detected similar ground water elevations, but different estimates of ground water flow direction. A remedial investigation at the Arco gas station approximately 500 feet northeast of the Site measured ground water flow as predominantly to the southwest, using eight monitoring wells spaced throughout the small property. Another remedial investigation, at the Texaco gas station 100 feet east of the property on the northwest corner of 4th Avenue South and South Lander Street, concluded that ground water flow was predominantly east, using approximately eight monitoring wells spaced across the property. Two other less intensive investigations at nearby LUST locations concluded that ground water flow was to the west and to the east. These contradictory conclusions probably arise from the fact that the ground water gradient in the area is very low and difficult to measure accurately. In addition, there may be a good deal of variation in flow directions because of lithologic inconsistencies and tidal influences. Based on the historical landscape, geology of the area, current topographical data, and geologic investigations at the Site and at nearby properties, ICF KE estimates that the predominant ground water flow direction is roughly southwest towards the Duwamish waterway. Because of the low gradient, as well as the fine-grained silts and clays just below the water table, ground water is likely to travel very slowly both horizontally and vertically.

The Site is located in Seismic Zone 3, as indicated on the 1994 Uniform Building Code zone map (in Leyendecker, et. al. 1995). The seismic zones, which range from Zone 0 to Zone 4, are not a direct indicator of the probability or risk of a seismic event. The 1994 Uniform Building Code zone map is intended as a guide for developing structural design requirements in municipal building codes which follow the Uniform Building Code. Building codes in Zone 0 typically have no or minimal building design requirements for seismic ground motion acceleration forces, while building codes in Zone 4 have significant building design requirements for seismic ground motion acceleration forces.

There are four major faults within a 40-mile radius of the Site (Rogers et al 1996). The South Whidbey Fault is a known active fault that trends northwest from the town of Duvall, Washington. It was near Duvall, along a portion of the fault known as the Rattlesnake Mountain Fault, that a magnitude 5.3 (Richter Scale) earthquake occurred in May 1996. The South Whidbey Fault lies approximately 20 miles to the northeast of the Site at its nearest point. The Seattle Fault runs across Puget Sound and through the City of Seattle, just north of the Site. There has been recent activity on this fault, including a magnitude 4.9 (Richter Scale) earthquake on June 23, 1997 along the fault on the west side of Puget Sound. A third unnamed major fault runs east-west across the south end of Puget Sound near Tacoma. The east end of this fault is approximately 15 miles southwest of the Site. The fourth fault is an unnamed fault running north-south along the Hood Canal approximately 30 miles west of the Site. There has been no significant activity on these unnamed faults in historical times.

3.0 INFORMATION FROM SITE RECONNAISSANCE

A site reconnaissance was performed in order to gather information that might indicate the likelihood of any adverse environmental conditions on the property. ICF KE, represented by Daniel P. White, performed a site visit on August 27 and September 5, 1997.

3.1 Storage Tanks and Drum Storage

No above-ground storage tanks or storage containers were identified at the Site during site reconnaissance or in the records search. No registered USTs were identified at the Site in the records search. However, through Site document research and site reconnaissance, it has been verified that one known UST remains at the Site. This UST is reported to be a 6,000-gallon, double-walled fiberglass tank installed in 1991 and used to store heating fuel. The tank was installed on the southwest side of the building in the same location as an 8,000-gallon UST that was removed just prior to installation of the new tank (see Figure 2).

? 6/8,000 ?

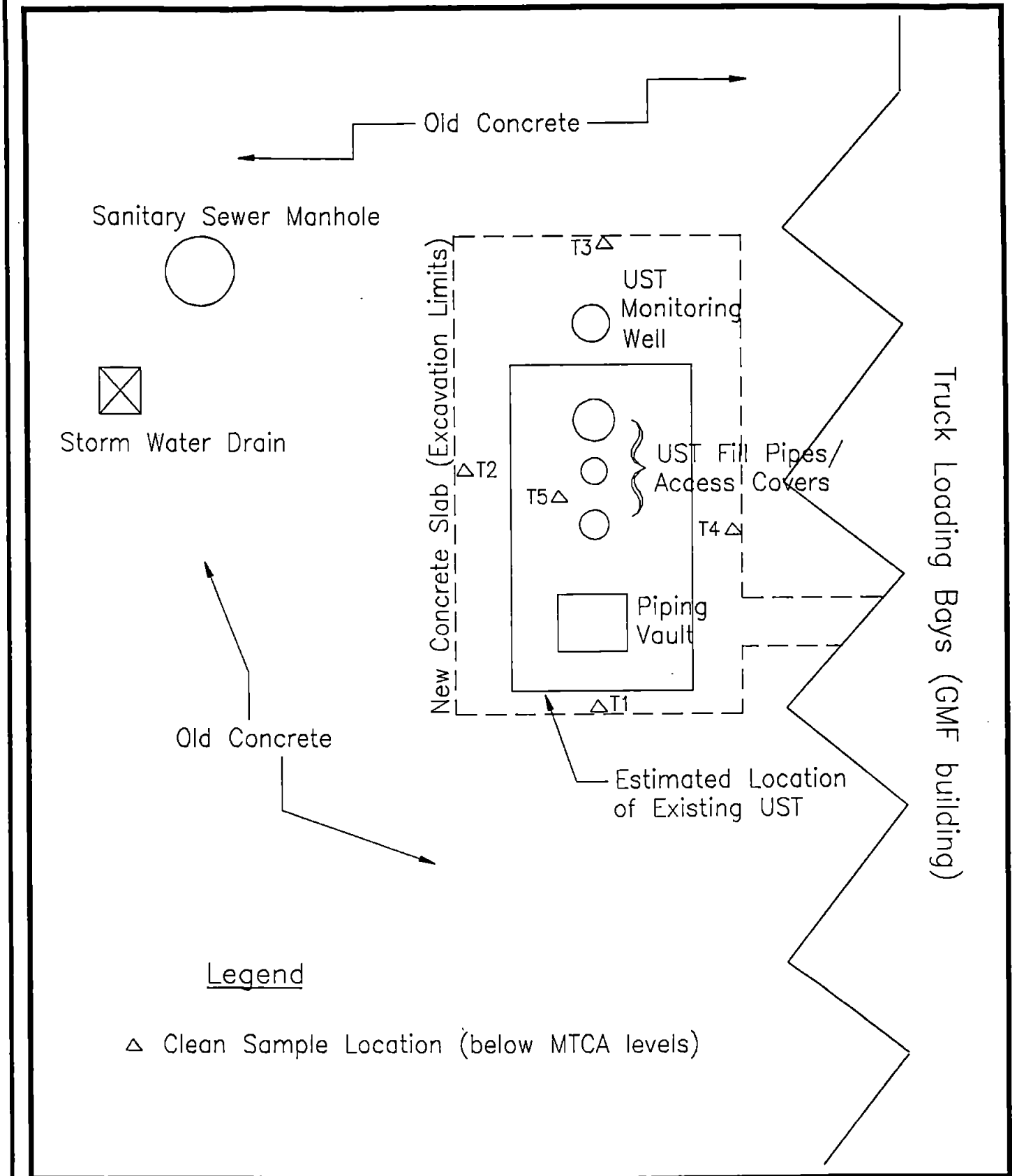
After excavation of the 8,000-gallon heating oil UST, hydrocarbon odors and discoloration of soils were observed in the excavation and a sheen was noted on the surface of the ground water in the bottom of the excavation (Earth Consultants 1991). Four holes, up to ½-inch in diameter, were noted in the bottom of the excavated UST. About 137 cubic yards of visibly contaminated soil was excavated and shipped to a remediation company. Before shipment, three samples of the excavated soil were analyzed for total petroleum hydrocarbons (TPH)-diesel and total recoverable petroleum hydrocarbons. Results indicated concentrations of TPH between non-detect and 310 parts per million (ppm). Confirmation samples collected from the excavation after the removal of the 8,000-gallon diesel fuel tank in 1991 indicate that all contaminated soil was removed. The approximately 2,500 gallons of ground water filling the excavation were purged from the hole and shipped to a treatment facility. Four soil samples collected from the excavation walls just above the ground water level were analyzed for TPH-diesel. One ground water sample collected after the ground water in the excavation had been allowed to recover for approximately 24 hours was also analyzed for TPH-diesel. The ground water sample collected from the excavation during the tank removal in 1991 indicated that the ground water did not contain contaminants above MTCA cleanup levels. Three of the four soil samples and the ground water sample were below the laboratory detection limit of 10 ppm and 0.5 ppm, respectively. The fourth soil sample had a TPH-diesel concentration of 160 ppm, below the Model Toxicity Control Act (MTCA) Method A soil cleanup level of 200 ppm (Earth Consultants 1991).

TPH GW < MTCA A

Ground water monitoring is normally required in such a situation. However, Earth Consultants concluded that:

- Testing of soil and ground water in a "worst case scenario" indicated that contaminant levels did not exceed MTCA standards; and
- Ground water flow direction was southeasterly, under the building. Installation of monitoring wells inside the building would be impractical and installing wells on the far side of the building would not yield measurable quantities of contaminants.

For these reasons, no other monitoring wells were installed and no further investigation of the area was conducted.



N

Not to Scale

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Figure 2: Existing Heating Fuel UST

Client:	Location:	Project:	Date:
USPS	GMF SEATTLE, WA	51701-427-00	09/20/97

Because the 6,000 gallon fuel tank installed at the same time was double-walled fiberglass and contained leak alarms in the tank and piping, there is no evidence to suggest that any leakage has occurred from the new tank. ICF KE believes that is it safe to assume that the soils are not contaminated.

There were a number of other USTs of varying capacity at the Site until 1994; all have been removed during several remedial events over the last ten years.

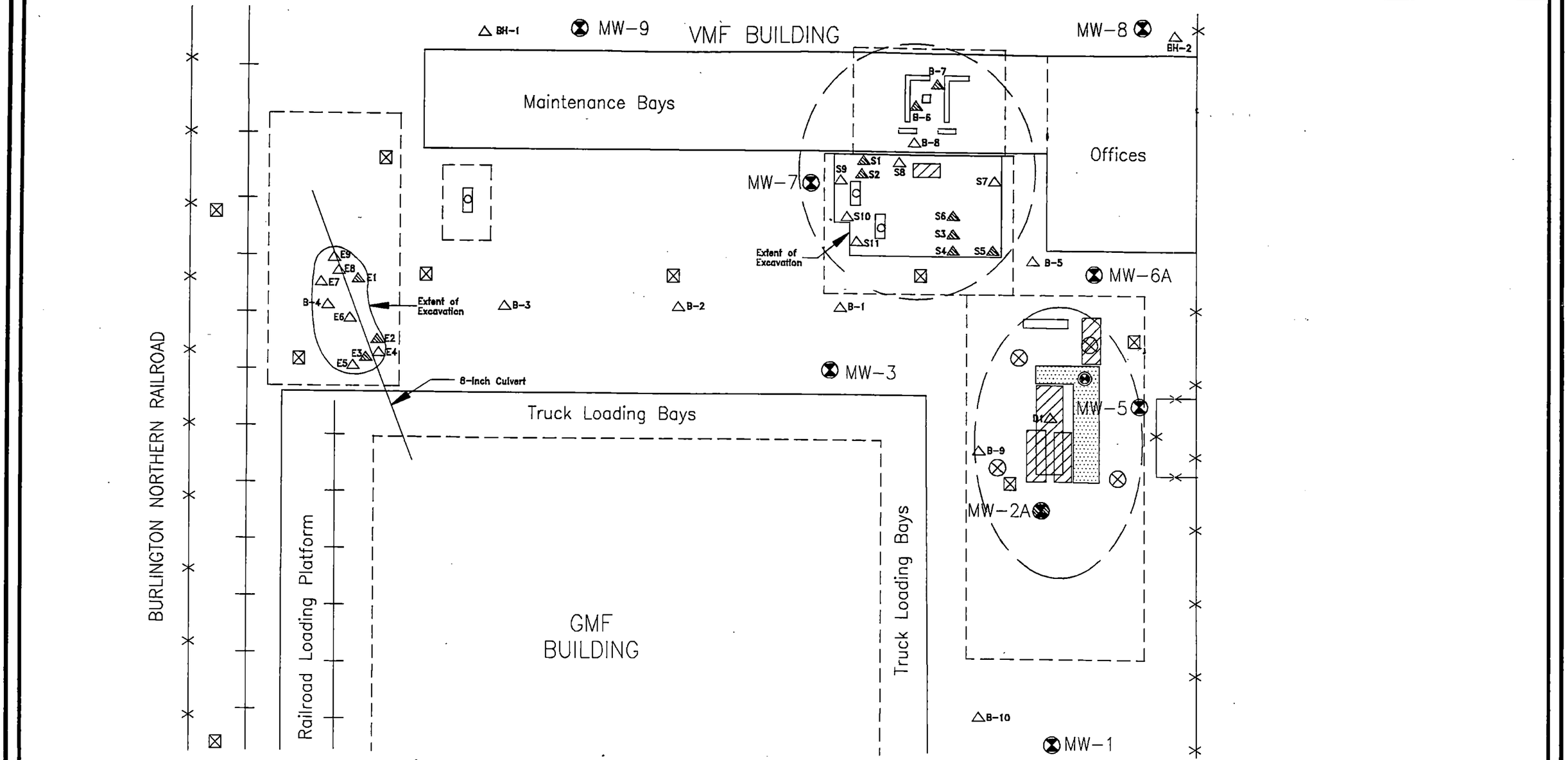
An eastern 8,000-gallon unleaded gasoline UST was located just to the east of the fuel pump island (Sverdrup 1987). This tank was installed at an unknown date and was most likely constructed of single-walled steel. The tank was discovered to be leaking by USPS personnel based on gasoline inventory measurements in December 1983 (PEMCO 1995). The tank was taken out of service at this time. No further investigation or remedial activities were carried out. No quantity estimates of leaked gasoline are available. The tank was removed in 1988 along with another 8,000-gallon gasoline UST and a diesel UST by Crowley Environmental (PEMCO 1995). No closure report for the tank removals was located.

A southeastern 8,000-gallon unleaded gasoline UST was located south of the fuel pump island. This tank was installed at an unknown date and was most likely constructed of single-walled steel. The tank was removed in 1988 along with the eastern 8,000-gallon gasoline UST and a diesel UST by Crowley Environmental (PEMCO 1995). No closure report for the tank removals was located.

A southwestern 8,000-gallon diesel UST was located south of the fuel pump island, adjacent to the southeastern 8,000-gallon gasoline tank discussed above (see Figure 4). This tank was installed at an unknown date and was constructed of single-walled steel. The tank was discovered to be leaking by USPS personnel based on fuel inventory measurements in January 1984 (PEMCO 1995). The tank capacity was measured at a reduced 6,000 gallons and was determined to have been leaking fuel at an average rate of 100 gallons per month. In April 1987, USPS personnel determined that the tank was leaking at a rate of 200 gallons per month. WDOE was notified of the diesel releases at this time. The tank was removed in 1988 along with the two 8,000-gallon gasoline USTs by Crowley Environmental (PEMCO 1995). No closure report for the tank removals was located.

A 12,000-gallon diesel UST was located south of the fuel pump island. This tank was a single-walled steel tank with double-walled fiberglass piping (PEMCO 1995). It was installed in 1988 by Crowley Environmental in the excavation created during the removal of the two southern 8,000 gallon gasoline and diesel fuel tanks. Four monitoring wells, screened across the water table, were installed at each corner of the tank and equipped with automatic product-detecting sensors to monitor for fuel leaks (URS 1994). These monitoring wells are still in place. The tank was removed from service in 1989 and removed from the ground in 1994 by PEMCO (PEMCO 1995).

Preliminary investigation work of the leaking 8,000-gallon diesel tank was conducted by Rittenhouse Zeman & Associates. A November 1984 report "Subsurface Exploration and Geotechnical Engineering Study - Fuel Tank Replacement" reported subsurface contamination in a boring next to the diesel tank (PEMCO 1995). No details are available on the compounds or concentrations detected. Monitoring well B-84-1 (now MW-2A) (refer to Figure 3) was installed in the boring (PEMCO 1995). Approximately 2 to 4 inches of free product was observed on the ground water table in this monitoring well in 1985 (Dames & Moore 1997). [The original document was not referenced by Dames & Moore (1997)].



LEGEND

MW-2A FORMER MONITORING WELL
STORM WATER DRAIN
UST OBSERVATION WELL
CONTAMINATED SOIL SAMPLE
CLEAN SOIL SAMPLE
GROUNDWATER COLLECTION TRENCH
AREA OF CONCERN (AOC) BOUNDARY
GROUNDWATER EXTRACTION WELL
CONTAMINATED WATER SAMPLE
OIL/WATER SEPARATOR
FORMER UST

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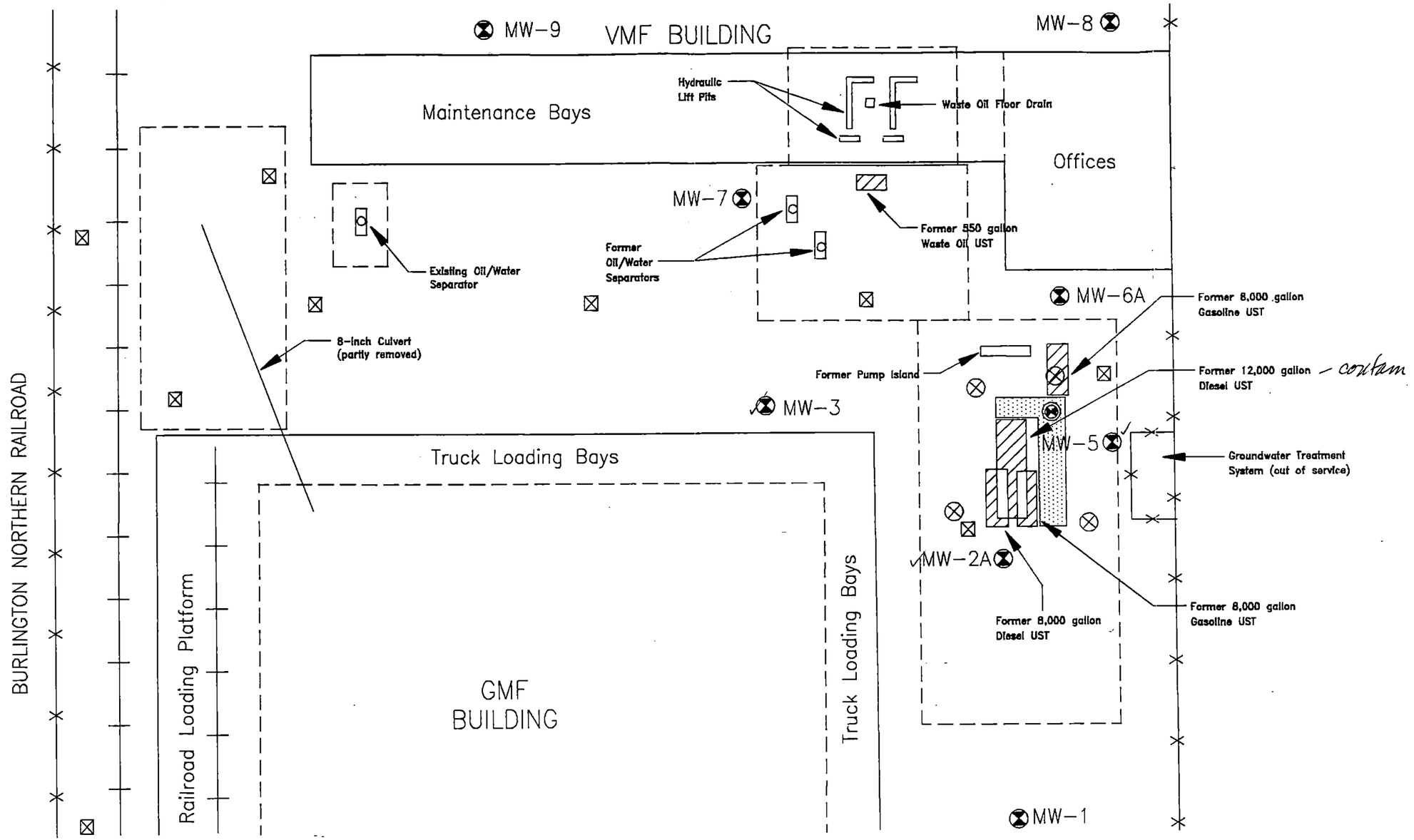
1191 Second Ave.
Seattle, WA 98101

Figure 3: Sampling Locations

Client:	Location:	Project:	Date:
USPS	GMF SEATTLE, WA	51701-427-00	09/20/97

0 25 50 75 100
APPROXIMATE SCALE IN FEET

N



LEGEND

MW-2A FORMER MONITORING WELL	OIL/WATER SEPARATOR
GROUNDWATER EXTRACTION WELL	FORMER UST
STORM WATER DRAIN	AREA OF CONCERN (AOC) BOUNDARY
UST OBSERVATION WELL	GROUNDWATER COLLECTION TRENCH

ICF KAISER 1191 Second Ave. Seattle, WA 98101

Figure 4: Site Plan

Client:	Location:	Project:	Date:
USPS	GMF SEATTLE, WA	51701-427-00	09/20/97

0 25 50 75 100

APPROXIMATE SCALE IN FEET

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WDOE was notified of the diesel leak in 1987. In response, WDOE requested that the USPS install a ground water interception trench and extraction system. The USPS contracted with Sverdrup Corp. to conduct an investigation and install the requested remedial system. The Sverdrup Corp. installed the ground water interception trench, a large-diameter ground water extraction well, and a free-product recovery and ground water treatment system (see Figure 4). Most of the extraction and treatment system is still in place. In addition, they installed eight shallow monitoring wells (four in the immediate vicinity of the tanks) to monitor ground water quality around the tanks (URS 1994). The extraction and treatment system consisted of a pump to skim-free product from the water surface. This product was pumped into a product holding tank. The current contents of the holding tank are unknown. Another pump pumped ground water into a surge tank, through particulate filters, and through two granular activated carbon units, before discharging the water to the sanitary sewer (Dames & Moore 1997). The system was started on June 24, 1987, and ran until the end of January 1988. According to an agreement with WDOE, the system was to be run until the layer of free product measured less than 1/8-inch thick (WDOE 1988). During the last two months of operation, no free product was recovered (Sverdrup 1988). According to meters on the product tank, a total of approximately 2,300 gallons of product was recovered during the operation of the system (Dames & Moore 1997). WDOE also stated that continued ground water monitoring, as well as the installation of several new wells beyond the boundaries of the existing wells, would be required (WDOE 1988). No additional wells were installed. Ground water monitoring was apparently conducted from the existing monitoring wells in 1987 and 1988 by Resources Conservation Company. Results of this monitoring were not located.

B, Pb > MTCA

Three monitoring wells (MW-2A, MW-3, and MW-6A) were sampled for TPH, benzene, toluene, ethylbenzene, and xylene (BTEX) compounds, and lead by PEMCO in April 1994 (PEMCO 1994a). Results indicated that levels of benzene were 0.16 ppm in MW-2A, above the MTCA cleanup standard of 0.005 ppm. Lead levels were above MTCA cleanup standards for all three wells. All other contaminant levels were non-detect or below cleanup levels. In June 1994, PEMCO sampled all existing wells that reached ground water. Once again, MW-2A had levels of benzene above MTCA cleanup levels (PEMCO 1994b). All the wells had levels of lead above MTCA cleanup standards. In the same investigation, PEMCO took one sample from a depth of 5-6 feet in a soil boring (B-9) near the southeast corner of the 12,000-gallon diesel tank. Levels of TPH, BTEX compounds, and lead were non-detect or extremely low (see Table 1).

The 12,000 gallon diesel tank was removed in 1994. No holes or other defects in the single-walled steel tank or piping were observed at the time of removal (PEMCO 1995). Strong gasoline odors were detected at the base of the fill pipe. Approximately five cubic yards of material were removed from this location and disposed of at an appropriate landfill. The pea gravel that had surrounded the tank was also partially removed. Due to the size of the surrounding gravel fill material, PEMCO had reached an agreement with WDOE that head-space vapor measurements of the pea gravel would be used to assess the degree of contamination rather than laboratory analysis (PEMCO 1995). Headspace organic vapor measurements from excavated gravel and gravel obtained just above the water line on each wall of the excavation ranged from 0 to 64 ppm. These levels were considered to be clean enough (below 100 ppm, as stated in PEMCO 1995) that the excavated pea gravel could be used as backfill in the excavation. A ground water sample was also obtained from the excavation in June 1994 and analyzed for TPH and BTEX compounds. All of these compounds were found to be present at levels far above MTCA cleanup standards (see Table 1). The contamination in the excavation was theorized to be primarily the result of releases from the two leaking USTs formerly at this location.

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Table 1
UST Area Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level	
Location			B-9
Depth			6 feet bgs
Date Collected			6/15/94
TPH-gas	PPM	100 PPM	ND
TPH-diesel	PPM	200 PPM	ND
TPH-other	PPM	200 PPM	-
B	PPM	0.5 PPM	ND
T	PPM	40 PPM	ND
E	PPM	20 PPM	ND
X	PPM	20 PPM	0.021
PCBs	PPM	1 PPM/10 PPM	-
Pb	PPM	250 PPM/1000 PPM	-
Metals	PPM	varies	-
VOCs	PPM	varies	-
semi-VOCs	PPM	varies	-
PAHs	PPM	1 PPM/20 PPM	-

W of 12,000gal Diesel tank; gw flow E →

GROUND WATER

		MTCA Cleanup Level								
Location			D1	MW-1	MW-1	MW-2A	MW-2A	MW-2A	MW-3	MW-3
Date Collected			6/30/94	6/15/94	1/16/96	4/20/94	6/15/94	1/16/96	4/20/94	6/15/94
TPH-gas	PPM	1.0 PPM	7.4	ND	-	0.35	-	-	<0.15	ND
TPH-diesel	PPM	1.0 PPM	5.8	-	ND	0.5	-	0.27	0.8	-
TPH-other	PPM	1.0 PPM	0.63	-	ND	-	-	ND	-	-
B	PPB	5 PPB	350	ND	ND	160	34	180	<1.0	ND
T	PPB	40 PPB	980	ND	ND	2	ND	ND	<1.0	ND
E	PPB	30 PPB	130	ND	ND	3	2.1	5.4	<1.0	ND
X	PPB	20 PPB	730	ND	ND	8	0.65	ND	<1.0	ND
PCBs	PPB	0.1 PPB	-	-	-	-	-	-	-	-
Pb	PPM	0.005 PPM	-	0.0092	-	0.57	0.25	-	0.42	0.63
PAHs	PPB	0.1 PPB	-	-	ND	-	-	*	-	-

Notes: Shaded boxes indicate that the contaminant concentration is above MTCA cleanup levels.
Dash ("-") indicates that the sample was not analyzed for this contaminant.
* Other VOCs detected included carbon disulfide (5.8 PPB), isopropylbenzene (20 PPB), and n-propylbenzene (41 PPB).
** napthalene (8.6 PPB)

Table 1
UST Area Sample Summary

GROUND WATER

		MTCA Cleanup Level						
Location			MW-3	MW-5	MW-5	MW-6A	MW-6A	MW-6A
Date Collected			1/16/96	6/15/94	1/16/96	4/20/94	6/15/94	1/16/96
TPH-gas	PPM	1.0 PPM	-	ND	-	<0.015	ND	-
TPH-diesel	PPM	1.0 PPM	ND	-	ND	<0.3	-	ND
TPH-other	PPM	1.0 PPM	ND	-	ND	-	-	ND
B	PPB	5 PPB	ND	ND	ND	<1.0	ND	ND
T	PPB	40 PPB	ND	ND	ND	<1.0	ND	ND
E	PPB	30 PPB	ND	ND	ND	<1.0	ND	ND
X	PPB	20 PPB	ND	ND	ND	<1.0	ND	ND
PCBs	PPB	0.1 PPB	-	-	-	-	-	-
Pb	PPM	0.005 PPM	-	0.052	-	2.7	0.37	-
PAHs	PPB	0.1 PPB	**	-	ND	-	-	ND

No further monitoring of ground water has been conducted since 1996. However, at some point since the last round of monitoring, all monitoring wells were sealed with a metal cap embedded in concrete. It is not known whether the wells were drilled out or otherwise destroyed before capping.

Based on the results of the latest round of ground water sampling, conducted by PEMCO in June 1996, it appears that ground water contamination is limited to the immediate vicinity of the former USTs. This contamination consists of elevated levels of TPH and BTEX compounds detected in the excavation and in MW-2A, which is located approximately 20 feet south of the former 12,000-gallon diesel UST (PEMCO 1995). Non-detect or very low concentrations of TPH and BTEX compounds were found in MW-3, located 70 feet west; MW-6A, located 50 feet north; and MW-5, located 40 feet east of the former 12,000-gallon diesel UST (PEMCO 1995). Levels of lead above MTCA cleanup levels are endemic to the Site.

In addition to the tanks discussed above, a waste oil UST was also located on the Site. The waste oil UST is discussed in Section 3.2.

3.2 Hazardous Substances, Petroleum Products

There are several site-wide environmental conditions in soil and ground water at the Site. These issues are primarily the result of contamination in the fill material used to fill in marshlands in the area of the Site soon after the turn of the century. This fill material probably consisted of both natural materials and demolition debris, and comprises approximately the top ten feet of soil at the Site. Most borings at the Site and in the vicinity of the Site have detected primarily natural sandy soil, but there are apparently pockets of industrial debris and associated hydrocarbon contamination. This debris was detected especially in the culvert excavation (Figure 3).

The extent of localized TPH contamination in the fill material is unknown. Levels of TPH above MTCA cleanup levels have been detected in four borings that were completed as a part of an environmental/geotechnical investigation for a proposed expansion of the GMF facility. These borings were located in the parking areas north of the VMF building. Two of these borings, BH-1 and BH-2 (see Figure 3), located just north of the VMF building at either end, also had levels of polyaromatic hydrocarbons (PAHs), below MTCA industrial soil cleanup levels. The borings where this soil was detected are not located near any known source of contamination and appear to be another artifact of the imported fill material in the area.

Lead has been detected in a number of soil and ground water samples taken during several of the remedial activities at the Site. These include a complete sampling of 7 monitoring wells by PEMCO in June 1994 in which every well had levels of total lead well above MTCA cleanup levels (see Table 2). Because the lead contamination has been detected in so many locations at the property, as well as at other properties in the vicinity of the Site, previous investigators have concluded that the lead is not the result of leaking USTs. This conclusion is supported by the fact that the lead detected at the Site is inorganic, not like the tetraethyl lead found in leaded gasoline (PEMCO 1995 and WDOE files).

Table 2

Site-wide Concerns: Sample Summary – June 94

SOIL

		MTCA Residential/Industrial Cleanup Level							
Location			B-1	B-5	B-10	BH-1	BH-2	BH-3	BH-4	BH-4
Depth			7 feet bgs	6 feet bgs	6 feet bgs	2.5 feet bgs	4 feet bgs	7.5 feet bgs	1 foot bgs	5 feet bgs
Date Collected			6/14/94	6/14/94	6/15/94	1/5/95	1/5/95	1/5/95	1/5/95	1/5/95
TPH-gas	PPM	100 PPM	2.7	10	ND	-	-	-	-	-
TPH-diesel	PPM	200 PPM	ND	ND	ND	-	-	-	-	-
TPH-other	PPM	200 PPM	-	-	-	2640	518	58.8	498	89
B	PPM	0.5 PPM	ND	ND	ND	ND	ND	ND	ND	ND
T	PPM	40 PPM	ND	0.039	ND	ND	ND	ND	ND	ND
E	PPM	20 PPM	ND	ND	ND	2.1	0.092	ND	ND	ND
X	PPM	20 PPM	ND	0.026	ND	2.8	0.12	ND	ND	ND
PCBs	PPM	1 PPM/10 PPM	-	-	-	0.25	ND	0.32	ND	0.049
Pb	PPM	250 PPM/1000 PPM	-	-	-	31.2	357	ND	ND	5.8
Metals	PPM	varies	-	-	-	^^	^^	^^	^^	^^
VOCs	PPM	varies	-	-	-	^	^	-	-	-
semi-VOCs	PPM	varies	-	-	-	-	-	-	-	-
PAHs	PPM	1 PPM/20 PPM	-	-	-	7.36	16.76	0.153	ND	0.132

GROUND WATER

		MTCA Cleanup Level					
Location			MW-1	MW-1	MW-8	MW-9	MW-9
Date Collected			6/15/94	1/16/96	1/15/96	6/15/94	1/16/96
TPH-gas	PPM	1.0 PPM	ND	-	-	ND	-
TPH-diesel	PPM	1.0 PPM	-	ND	ND	-	ND
TPH-other	PPM	1.0 PPM	-	ND	ND	-	ND
B	PPB	5 PPB	ND	ND	ND	ND	ND
T	PPB	40 PPB	ND	ND	ND	ND	ND
E	PPB	30 PPB	ND	ND	ND	ND	ND
X	PPB	20 PPB	ND	ND	ND	ND	ND
PCBs	PPB	0.1 PPB	-	-	-	-	-
Pb	PPM	0.005 PPM	0.0092	-	-	0.048	-
PAHs	PPB	0.1 PPB	-	ND	ND	-	ND

Notes: Shaded boxes indicate that the contaminant concentration is above MTCA cleanup levels.
Dash ("-") indicates that the sample was not analyzed for this contaminant.
^ chlorobenzene was detected at low levels (below MTCA levels)
^^ several of the 8 RCRA metals were detected at levels significantly below MTCA levels

Table 2
Site-wide Concerns: Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level		
Location			BH-5	BH-6
Depth			10 feet bgs	10 feet bgs
Date Collected			1/5/95	1/5/95
TPH-gas	PPM	100 PPM	-	-
TPH-diesel	PPM	200 PPM	-	-
TPH-other	PPM	200 PPM	284	63.2
B	PPM	0.5 PPM	ND	ND
T	PPM	40 PPM	ND	ND
E	PPM	20 PPM	ND	ND
X	PPM	20 PPM	ND	ND
PCBs	PPM	1 PPM/10 PPM	0.17	0.035
Pb	PPM	250 PPM/1000 PPM	15.3	ND
Metals	PPM	varies	^^	^^
VOCs	PPM	varies	-	-
semi-VOCs	PPM	varies	-	-
PAHs	PPM	1 PPM/20 PPM	0.691	ND

Two theories have been hypothesized for the existence of the widespread lead contamination. One is that there was residual lead in debris used as fill when the area was filled after the turn of the century. A second theory is that the lead derives from a lead smelter that was located in the area in the early part of the century (PEMCO 1995).

WDOE has acknowledged the extent of the problem and the impracticality and technical problems associated with trying to clean up sites in the corridor to MTCA standards. In response, a task force, roughly termed the "Duwamish River Corridor Task Force", has been established to try to develop amendments to the MTCA standards. To the best of ICF KE's knowledge, these amendments would establish alternate cleanup standards, raising the current criteria cleanup levels to levels that could more reasonably be achieved at sites within the Duwamish River Corridor. The purpose of these amendments would be to promote development of properties in the Corridor that are contaminated with levels of contaminants above MTCA cleanup levels but endemic to the area. It is not known when these amendments would be proposed, or what the likely timeframe is for enactment of the rules; however, ICF KE believes that it will be at least 2-3 years before any actions are taken.

All but one of the USTs that were located at the Site were removed over the last 10 years. The one UST remaining at the Site is a 6,000-gallon, double-walled fiberglass tank installed in 1991 on the southwest side of the building and used to store heating fuel. This tank still contains an unknown quantity of heating fuel and is used as a backup fuel source (the primary fuel source is natural gas) for the GMF building's heating system (Ubis 1997).

No other containers or tanks of hazardous materials or petroleum products were observed or are known at the Site.

3.3 Used Oil Management

Since neither the GMF or VMF buildings are in use, no used oil is generated at the Site. When the facilities were occupied, used oil from vehicle maintenance operations was stored in a 550-gallon waste oil UST located just south of the VMF building (see Section 7.0, Site Plot Plan). A pipe connected the tank to a floor drain in the VMF building (Dames & Moore 1997). The primary method of access to the tank is unknown. Soils contaminated with petroleum hydrocarbons and chlorinated solvents were discovered during remedial events in 1994. Figure 3 shows the location of each of the samples and Table 3 gives the analytical results for each sample.

The 550-gallon single-walled steel waste oil UST was installed in 1967 (USPS files). It was located just south of the maintenance bays that house the hydraulic lifts. A waste oil drain located between the two lifts was used by mechanics to dispose of waste oil. The drain was connected to the UST by underground piping. The UST was pumped out periodically from an access port on the top of the tank.

Oil/water separators were located to the west and southwest of the waste oil UST. One was apparently an old separator, the other a new one. The old separator was connected to floor drains which collected wash-down water in the VMF building maintenance bays; the new separator was connected to the roof drains as well as effluent from the old separator (PEMCO 1995). Both separators presumably drained to the stormwater sewer system.

Table 3
Former UST/Oil Water Separator Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level								
Location			B-1	B-5	S1	S3	S4	S5	S6	S7
Depth			7 feet bgs	6 feet bgs	8 feet bgs	8 feet bgs	8 feet bgs	8 feet bgs	8 feet bgs	8 feet bgs
Date Collected			6/14/94	6/14/94	8/3/94	7/27/94	7/27/94	7/27/94	7/12/94	7/27/94
TPH-gas	PPM	100 PPM	2.7	10	-	ND	-	-	ND	-
TPH-diesel	PPM	200 PPM	ND	ND	880	190	-	-	69	-
TPH-other	PPM	200 PPM	-	-	3300	310	270	230	540	190
B	PPM	0.5 PPM	ND	ND	-	-	-	ND	-	-
T	PPM	40 PPM	ND	0.039	-	-	-	ND	-	-
E	PPM	20 PPM	ND	ND	-	-	-	ND	-	-
X	PPM	20 PPM	ND	0.026	-	-	-	ND	-	-
PCBs	PPM	1 PPM/10 PPM	-	-	-	-	-	-	-	-
Pb	PPM	250 PPM/1000 PPM	-	-	-	-	-	-	-	-
Metals	PPM	varies	-	-	-	-	-	-	-	-
VOCs	PPM	varies	-	-	-	-	-	ND	-	-
semi-VOCs	PPM	varies	-	-	ND	-	-	-	-	-
PAHs	PPM	1 PPM/20 PPM	-	-	-	-	-	-	-	-

GROUND WATER

		MTCA Cleanup Level						
Location			MW-3	MW-3	MW-3	MW-7	MW-7	S2
Date Collected			4/20/94	6/15/94	1/16/96	6/15/94	1/16/96	8/3/64
TPH-gas	PPM	1.0 PPM	<0.15	ND	-	ND	-	-
TPH-diesel	PPM	1.0 PPM	0.8	-	ND	-	ND	2.8
TPH-other	PPM	1.0 PPM	-	-	ND	-	ND	-
B	PPB	5 PPB	<1.0	ND	ND	0.57	ND	1.6
T	PPB	40 PPB	<1.0	ND	ND	ND	ND	ND
E	PPB	30 PPB	<1.0	ND	ND	ND	ND	ND
X	PPB	20 PPB	<1.0	ND	ND	ND	ND	1.6
PCBs	PPB	0.1 PPB	-	-	-	-	-	-
Pb	PPM	0.005 PPM	0.42	0.63	-	0.24	-	-
PAHs	PPB	0.1 PPB	-	-	**	-	ND	21.34

Notes: Shaded boxes indicate that the contaminant concentration is above MTCA cleanup levels.
Dash ("-") indicates that the sample was not analyzed for this contaminant.
** napthalene (8.6 PPB)
*** cis1,2-dichloroethene (12 PPB), trichloroethene (1.4 PPB), and tetrachloroethene (1.1 PPB)

Table 3

Former UST/Oil Water Separator Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level				
Location			S8	S9	S10	S11
Depth			8 feet bgs	8 feet bgs	8 feet bgs	8 feet bgs
Date Collected			7/12/94	8/3/94	8/3/94	8/3/94
TPH-gas	PPM	100 PPM	ND	-	-	-
TPH-diesel	PPM	200 PPM	ND	ND	130	ND
TPH-other	PPM	200 PPM	180	ND	140	90
B	PPM	0.5 PPM	ND	-	-	-
T	PPM	40 PPM	ND	-	-	-
E	PPM	20 PPM	ND	-	-	-
X	PPM	20 PPM	ND	-	-	-
PCBs	PPM	1 PPM/10 PPM	ND	-	-	-
Pb	PPM	250 PPM/1000 PPM	-	-	-	-
Metals	PPM	varies	-	-	-	-
VOCs	PPM	varies	***	-	-	-
semi-VOCs	PPM	varies	-	-	-	-
PAHs	PPM	1 PPM/20 PPM	-	-	-	-

The waste oil UST was removed on June 30, 1994 by PEMCO in several stages. Upon removal of the UST, holes were identified in the bottom of the tank, and contaminated soil was discovered beneath and around the tank (PEMCO 1995). Initial sampling in the excavation after removal of the UST indicated high levels of TPH and BTEX compounds (TPH to 41,000 ppm, toluene to 2,700 ppm, ethylbenzene to 16,000 parts per billion (ppb), xylene to 83,000 ppb). A second round of excavation was completed on July 12, 1994. The excavation was confined on the north side of the tank by the VMF building. Confirmation samples collected after this round of excavation from the sidewalls and bottom of the excavation again revealed elevated levels of TPH (to 2,300 ppm) in several of the samples. BTEX compounds were not detected in the one sample analyzed for these compounds. A third round of excavation was completed on July 26, 1994. The excavation was confined on the southwest side of the tank by a buried underground utility vault. Confirmation samples collected after this round of excavation revealed elevated levels of TPH (to 800 ppm) on the west and south sides of the excavation. It was determined that contamination was probably migrating laterally along the top of a layer of mortared brick just above the water table at a depth of 8 feet. It was assumed that this brick layer was fill material composed primarily of demolition debris. The fourth, and final, round of excavation was conducted on August 3, 1994. This round focused on the western side of the excavation around the oil/water separators, including removal of the separators themselves. The entry pipe connection on the old separator was in poor condition and may have leaked liquids flowing into the separator. The excavation was not expanded farther south. Confirmation samples indicated elevated levels of TPH (to 3,300 ppm) in the north wall of the excavation, while samples collected from the west and south walls of the expanded excavation showed TPH levels below MTCA cleanup standards. A ground water sample was collected from a trough in the bottom of the excavation below the former location of the old oil/water separator, after purging the ground water and allowing a 12-hour recharge period. This sample revealed elevated levels of TPH (2.8 ppm) and PAHs (21.34 ppb total PAHs).

Soils at the bottom and around the edges of the 1994 excavation of the waste oil UST contain petroleum hydrocarbons above MTCA cleanup levels. Confirmation samples taken at approximately 8 feet below ground surface on the south, southeast, and north walls and on the bottom of the excavation indicated that these areas contain residual contamination. On the south wall, this contamination is primarily located in a thin 6-inch layer (based on visual inspection) located at approximately 8 feet below ground (PEMCO 1995). Confirmation sample results indicated that the northeast, west, and southwest walls do not contain elevated levels of any contaminants. In addition, the ground water sample obtained from the bottom of the excavation indicated levels of petroleum hydrocarbons and PAHs above MTCA cleanup levels.

There are two below-grade hydraulic lift pits located in adjacent maintenance bays 2 and 3. Each pit consists of two separate vaults, an east-west rear piston vault, and a north-south, L-shaped front piston vault (see Figure 4). The vaults are approximately 8 feet deep. During the site visit, ICF KE inspected the vaults. They are constructed of concrete that appears to be in good condition. The rear piston vaults have metal siding over the concrete on the sides of the vault. The pistons and other operable hardware have been removed from all four vaults. Less than a foot of water/oil/sludge was observed in the bottoms of the vaults.

According to USPS personnel formerly at the Site, during the last few years that the lifts were used (approximately 1989-1991), approximately five gallons per week of hydraulic oil was required as makeup oil; approximately this amount would leak from the system (Dames & Moore 1997 and Ubis 1997). However, it is not known whether this oil simply leaked from the

vaults, from where it would later be pumped, or whether the oil actually leaked through the vaults or from underground piping into the subsurface.

In addition to the hydraulic lifts, there was a floor drain between the two lift vaults that was used to dispose of waste oil. This floor drain was connected to the waste oil UST just south of the building (Dames & Moore 1997). The floor drain was capped in 1994 when the waste oil UST was excavated.

PEMCO completed an investigation of the Site in 1994, including three subsurface borings inside the VMF building near the hydraulic lift pits (Figure 4). A soil sample was collected from the bottom of each of these borings, at a depth of between 5 and 6 feet in two of the borings and between 7 and 8 feet in the third boring (PEMCO 1994). These samples were analyzed for TPH, cadmium, chromium, lead, PCBs, and VOCs. Results indicated that levels of TPH in the diesel and heavy oil range were 100, 230, and 5,800 ppm (see Table 4). Two of these concentrations are above the MTCA Method A cleanup level of 200 ppm. Two of the samples tested positive for lead, at levels of 0.46 and 0.99 ppm, well below the MTCA Method A residential cleanup level of 250 ppm. Low levels of tetrachloroethene and toluene, far below MTCA cleanup levels, were detected. PCBs were not detected in any of the samples.

These analytical results indicate that there probably has been a release of some quantity of hydraulic and/or motor oil from the lift pits and waste oil drain into the subsurface soils (see Table 4).

While it is difficult to determine the extent of possible ground water contamination from existing data, no contaminants were detected in nearby MW-7, MW-8, or MW-9 during the last round of ground water sampling in 1996.

There is an existing oil/water separator located south of the western end of the VMF building (see Figure 4). It consists of the area surrounding an existing oil/water separator. Is not known when this separator was installed. The unit looks fairly new and ICF KE observed newer asphalt installed around the separator and over what is assumed to be incoming and outgoing piping. The separator may have been installed in 1994 to replace the two oil/water separators removed at that time. The location of the new asphalt suggests that the long floor drain in the vehicle washing bay, as well as the storm water drain near the southwest corner of the VMF building, drain to the oil/water separator which then discharges water southward presumable to the stormwater or sanitary sewer system that runs along the north side of the GMF building. It is unlikely that there is contaminated soil or ground water near the existing oil/ water separator.

3.4 Pesticides/Herbicides

The Site has been the location of tidelands, vacant woodland, and the current buildings and parking lots, which completely cover the property. No landscaping has been or is currently performed at the Site. No farming or ranching has taken place at the Site. Small amounts of pesticides or herbicides may have been applied sporadically to the property during the last 100 years, but these amounts are not expected to be significant and do not continue to impact the property.

Table 4
Hydraulic Lift Pits Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level			
Location			B-6	B-7	B-8
Depth			6 feet bgs	8 feet bgs	6 feet bgs
Date Collected			6/15/94	6/15/94	6/15/94
TPH-gas	PPM	100 PPM	-	-	-
TPH-diesel	PPM	200 PPM	-	-	-
TPH-other	PPM	200 PPM	230	5800	100
B	PPM	0.5 PPM	ND	ND	ND
T	PPM	40 PPM	10	4.6	6
E	PPM	20 PPM	ND	ND	ND
X	PPM	20 PPM	ND	ND	ND
PCBs	PPM	1 PPM/10 PPM	ND	ND	ND
Pb	PPM	250 PPM/1000 PPM	0.46	0.99	ND
Metals	PPM	varies	-	-	-
VOCs	PPM	varies	-	-	-
semi-VOCs	PPM	varies	-	-	-
PAHs	PPM	1 PPM/20 PPM	-	-	-

GROUND WATER

		MTCA Cleanup Level			
Location			MW-7	MW-7	MW-8
Date Collected			6/15/94	1/16/96	1/15/96
TPH-gas	PPM	1.0 PPM	ND	-	-
TPH-diesel	PPM	1.0 PPM	-	ND	ND
TPH-other	PPM	1.0 PPM	-	ND	ND
B	PPB	5 PPB	0.57	ND	ND
T	PPB	40 PPB	ND	ND	ND
E	PPB	30 PPB	ND	ND	ND
X	PPB	20 PPB	ND	ND	ND
PCBs	PPB	0.1 PPB	-	-	-
Pb	PPM	0.005 PPM	0.24	-	-
PAHs	PPB	0.1 PPB	-	ND	ND

Notes: Shaded boxes indicate that the contaminant concentration is above MTCA cleanup levels.
Dash ("-") indicates that the sample was not analyzed for this contaminant.

3.5 Unidentified Substance Containers

No unidentified substance containers were observed on the Site or on any adjacent properties during the site visit. The GMF and VMF buildings at the Site have been cleared of all hazardous substance containers.

3.6 Air Quality

The Site is located in a non-attainment area for particulate matter (PM-10) under the National Ambient Air Quality Standards (NAAQS). The area is a maintenance area for both ozone and carbon monoxide air pollution (Pade 1997).

3.7 Potable Water Supply/Wells

All businesses in the area are connected to the Seattle Public Utilities water supply (Seattle Public Utilities 1997). Water for the City of Seattle is pumped from the Tolt River and Cedar River watersheds, in the Cascade foothills east of the city. The city water system supplies a sufficient quantity of high-quality water for the current buildings and any future development at the Site.

The ground water quality in this area of Seattle is poor due to the large amount of industry nearby and the proximity of Elliott Bay and the Duwamish waterway. Due to this poor water quality and the ready water supply from the City of Seattle, there are no potable water wells within ½-mile of the Site (EDR 1997 and WDOE Well Records 1997).

3.8 Waste Water

Because the facilities at the Site are not in use no waste water is produced. Domestic waste water at the Site would be discharged into the city sanitary sewer system. No process waste water has ever been generated at the GMF by USPS operations. Waste water collected within the VMF building was channeled through the one of three oil/ water separators (that operated at different periods in the facility's history) before being discharged into the sanitary sewer (Ubis 1997).

3.9 Storm Water

Storm water at the Site is collected by a series of drains in the paved areas at the Site (as shown on the Section 7.0, Site Plot Plan). Storm water entering these drains is discharged to the city storm water sewer system.

3.10 Wetlands/Pools

No wetlands are located at the Site or within approximately ½-mile of the Site. At one time, the area surrounding the Site consisted of tideflats and marshlands; however, it was filled near the turn of the century. All surface waters in the area run underground through storm sewers. The

nearest body of water is the East Duwamish waterway, a highly channelized and altered stretch of water that connects what remains of the Duwamish River with Elliott Bay. This waterway is located approximately ¾-mile west of the Site and consists primarily of a dredged channel lined with piers and ship loading facilities.

3.11 Sewage Disposal System/Septic Systems

Because the facilities at the Site are not in use, no waste water is currently produced. Domestic waste water at the Site is piped to the city sanitary sewer system.

3.12 Drains/Sumps/Pits

Drains, sumps, and pits at the Site include storm water drains in the paved parking areas, one oil/water separator vault south of the west end of the old VMF building, a vault containing the old extraction well south of the east end of the VMF building, a capped floor drain in the old VMF building, hydraulic lift pits in the vehicle maintenance bays, vaults for valves and piping associated with the still-in-place UST on the southwest side of the GMF building, and manholes for the sanitary sewer along the western edge of the property. All of these drains/sumps/pits are clearly identifiable and are discussed in more detail in other sections of this report.

During railroad spur rebuilding work in 1993, an abandoned 8-inch steel culvert containing black sludge was uncovered in an excavation. Laboratory analysis of a sample of the sludge gave results of 2,100 ppm TPH-D but non-detect for PCBs. Laboratory analysis of two samples of soil removed from the excavation showed levels of TPH at 340 ppm, above MTCA cleanup levels, and PCBs at a maximum of 634 ppb, below the MTCA residential soil cleanup level. Above-ground tracing of the culvert indicated that it ran north/northwest-south/southeast approximately 40 feet to the south and 20 feet to the north (Figure 4). At that time, the excavation was backfilled.

A removal action was undertaken in September 1994. The objective of this action was to remove as much of the culvert as possible, along with any associated contaminated soils (Weston 1994). During the course of the excavation, samples obtained from the bottom of the excavation were field analyzed for hydrocarbons to determine whether further soil removal was necessary. According to the final report, most of the hydrocarbon-impacted soil associated with the culvert was removed. The impacted soil was primarily located within a 2-foot radius of the pipe. During excavation several other pieces of debris, including a crushed drum and an oil-drip tray, were discovered. There were small areas of hydrocarbon-contaminated soils associated with this debris, which were also removed. Further excavation indicated that there was probably other industrial debris, as well as petroleum-contaminated soil, randomly scattered in the vicinity of the excavation. The culvert was removed from all areas where it was feasible to remove it. Excavation was prevented farther north by the existing railroad spur and farther south by the GMF building. It was decided that because of the scattered and undefined nature of the contamination associated with the scattered debris, further excavation of this contamination was infeasible.

From review of the relevant documents and figures, ICF KE estimates that the culvert was located at a depth of no more than 5 feet below ground surface. Visual estimates of the extent

of contamination around the culvert were that the contaminated soil only extended about 2 feet from the culvert in any direction.

Prior to backfilling the excavation, seven confirmatory samples were collected from the walls and bottom of the excavation and analyzed for TPH (Weston 1994). Of these samples, one contained a level of petroleum hydrocarbons of 730 ppm, which is above the MTCA cleanup level of 200 ppm. In addition, two samples had field analytical results of greater than 250 ppm TPH and were not analyzed in the laboratory. All three of these samples were located on the east and southeast walls of the excavation. Figure 3 shows the location of each of the contaminated samples, and Table 5 gives the analytical results for each confirmation sample.

Ground water was not encountered in the excavation (Weston 1994), and no testing of ground water in the vicinity of the culvert has been performed. Because there is no known source that might have leaked large amounts of contaminants, ICF KE believes that the likelihood that the ground water is contaminated is low.

3.13 Solid Waste

No solid waste or refuse was observed outside the building at the Site during the site visit. Because the facilities at the Site are not in use, no solid waste is generated at the Site. Solid waste generated at commercial buildings in this area is normally collected by private companies.

3.14 Transformer and Polychlorinated Biphenyls Equipment

The facility, built in 1954, originally had fluorescent light ballasts that contained PCBs. Some of these ballasts have been removed, but many remain (Dames and Moore 1997). It appears that there has never been a comprehensive or well-documented effort to replace the light ballasts, so records of quantities and locations of ballasts are not available.

According to a USPS internal letter dated March 21, 1995, two 1,000-KVA electrical transformers installed in the incoming electrical service vault at the GMF building contain oils with PCBs up to 8.7 ppm. This information was gathered by USPS employees from Seattle City Light. The vault is locked and controlled by the electric company. Twenty-nine other "dry" transformers at the facility do not contain PCB oils. ICF KE is presently attempting to confirm the exact location of the vault and the locations of the dry transformers. This information will be provided when received by ICF KE.

3.15 Stained Soils/Stains/Stressed Vegetation

No stains, stained soils, or stressed vegetation were noted during the site visit.

3.16 Odors/Pools of Liquids

No unusual odors or pools of liquids were observed during the site visit.

Table 5
Culvert Excavation Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level								
Location			E1	E2	E3	E4	E5	E6	E7	E8
Depth			~8 feet bgs	~8 feet bgs	~8 feet bgs	~10 feet bgs	~8 feet bgs	~10 feet bgs	~8 feet bgs	~10 feet bgs
Date Collected			9/29/94	9/29/94	9/29/94	9/29/94	9/29/94	9/29/94	9/29/94	9/29/94
TPH-gas	PPM	100 PPM	-	-	-	-	-	-	-	-
TPH-diesel	PPM	200 PPM	-	-	-	6	10	6	-	7
TPH-other	PPM	200 PPM	> 250	730	> 250	10	40	< 10	40	< 10
B	PPM	0.5 PPM	-	-	-	-	-	-	-	-
T	PPM	40 PPM	-	-	-	-	-	-	-	-
E	PPM	20 PPM	-	-	-	-	-	-	-	-
X	PPM	20 PPM	-	-	-	-	-	-	-	-
PCBs	PPM	1 PPM/10 PPM	-	-	-	-	-	-	-	-
Pb	PPM	250 PPM/1000 PPM	-	-	-	-	-	-	-	-
Metals	PPM	varies	-	-	-	-	-	-	-	-
VOCs	PPM	varies	-	-	-	-	-	-	-	-
semi-VOCs	PPM	varies	-	-	-	-	-	-	-	-
PAHs	PPM	1 PPM/20 PPM	-	7550	-	-	-	-	-	-

No ground water samples were collected for this AOC.

Notes: Shaded boxes indicate that the contaminant concentration is above MTCA cleanup levels.
Dash ("-") indicates that the sample was not analyzed for this contaminant.

Table 5
Culvert Excavation Sample Summary

SOIL

		MTCA Residential/Industrial Cleanup Level		
Location			E9	B-4
Depth			~8 feet bgs	7 feet bgs
Date Collected			9/29/94	6/14/94
TPH-gas	PPM	100 PPM	-	2.5
TPH-diesel	PPM	200 PPM	10	ND
TPH-other	PPM	200 PPM	30	-
B	PPM	0.5 PPM	-	ND
T	PPM	40 PPM	-	ND
E	PPM	20 PPM	-	ND
X	PPM	20 PPM	-	ND
PCBs	PPM	1 PPM/10 PPM	-	0.12
Pb	PPM	250 PPM/1000 PPM	-	-
Metals	PPM	varies	-	-
VOCs	PPM	varies	-	-
semi-VOCs	PPM	varies	-	-
PAHs	PPM	1 PPM/20 PPM	-	-

3.17 Asbestos-Containing Material

Asbestos was commonly used in building materials until approximately 1980. Since both the GMF and VMF buildings were constructed in 1954, many of the original building materials, as well as some materials installed since original construction, contain asbestos.

Various asbestos surveys of parts or all of the GMF and VMF building have been conducted since 1990. ICF KE conducted a comprehensive asbestos survey of the GMF building in 1996 (ICF KE 1996). An initial inspection of the entire facility was conducted in 1992 by Diagnostic Environmental which included collecting 342 samples of suspect asbestos-containing building materials (SACBM). In 1994, an additional 52 SACBM samples were collected by Hazcon, Inc. A follow up inspection was conducted by ICF KE in 1996 which included reviewing the two previous asbestos investigation reports, verifying ACM locations, identify SACBM that had not previously been characterized, and combining all three inspections into one report. An additional 126 SACBM samples were taken during the 1996 inspection to address conflicting information from the two previous reports, and to evaluate new materials or material that had not previously been sampled.

One additional sampling event was discovered during document review for this task. This sampling event was conducted by Weston in early 1995 and evaluated only 12 feet of the northern most portions of the second and third floors. A total of 36 samples were taken during that event.

The surveys identified a number of ACMs throughout the facility including floor tile, floor tile mastic, boiler insulation, wall and window caulking, ceiling panels, carpet, floor tile, and miscellaneous mastic, plaster, basecove, transite, joint compound, and pipe insulation. A few small amounts of pipe insulation and some floor tiles were reportedly removed but no documentation was located regarding these removals.

Weston conducted a visual asbestos survey of the VMF building in 1994 (Weston 1995b). This survey consisted of visually identifying suspected ACMs in the building. No samples were collected, and none of the identified materials have been confirmed to contain asbestos. Potential ACMs in the building include floor tile, plaster, ceiling tiles, window caulking, and tile and carpet mastic.

Based on the 1996 ICF KE survey, only those ACMs that are friable and/or have a hazard ranking of 4 or above are recommended to be removed. Those ACMs include straight pipe insulation and some roofing materials. Unless a given building is scheduled to be demolished (which is not the case here) roofing materials are typically not abated. Therefore, only the pipe insulation is recommended for abatement at a cost of approximately $200. Removal of the roofing materials would cost an estimated $14,500.

More detail on the asbestos materials found at the facility and recommended response actions can be found in a separate report, Asbestos Survey Report - General Mail Facility, Seattle, Washington.

3.18 Lead-Based Paint

Lead was commonly a constituent of paint until the 1970s. Since both the GMF and VMF buildings were constructed in 1954 and were presumably painted many times with lead-based paint (LBP), there is a strong likelihood that there is LBP at the facility.
No comprehensive assessment of LBP in either the GMF or VMF buildings has been conducted. However, a visual survey of paint in the GMF building was carried out in 1994 by Weston (Weston 1995b), in which 15 different layers of paint (based on color) were identified. These layers of paint were found throughout the interior and exterior of the building. Weston estimated the total quantity of LBP as 665,000 square feet as presented in Table 6.

Table 6
Potential Lead-Based Paint

Paint Color	Estimated Quantity (square feet)
Yellow	30,000
Orange	30,000
Orange-Rust	30,000
Red	30,000
Red-Brown	30,000
Brown	30,000
Green	30,000
Aqua-Green	30,000
Aqua-Green-Blue	30,000
Purple	30,000
Blue	30,000
White	100,000
Light Blue	100,000
Tan	100,000
Total Quantity	665,000

A follow-up sampling survey of the LBP at the northern ends of the second and third floors of the GMF building was conducted by Weston in 1995 (Weston 1995a). This survey was conducted in preparation for a proposed expansion of the facility that never took place. Thirteen different layers of paint, categorized based on age and color, were identified as the topmost layer of paint in different areas. Twelve of the thirteen layers of paint were classified as white and the thirteenth was classified as red. Most of the samples collected included underlying layers of paint of various colors. The concentrations of lead in the paint ranged from 29 ppm to 9,001 ppm. Five of the measured levels were above the United States Department of Housing and Urban Development's action level of 5,000 ppm. The results are presented in Table 7.

No survey of LBP in the VMF building has been conducted.

3.19 Radon

The buildings at the Site have not been tested for radon. Radon is generally not a development concern in the area. The USEPA map of radon hazards (USEPA 1993) classifies

King County as Zone 3, where average radon levels are below 2 picoCuries per Liter (pCi/L). In addition, the average radon activity in the first floor living area of approximately one hundred sites in King County was reported as 0.334 pCi/L (EDR 1997). This level is below the USEPA threshold of concern for residential buildings of 4.0 pCi/L (no threshold is available for commercial buildings). The potential for radon to be a concern at the Site is extremely low.

Table 7
Summary Of Lead-Based Paint Samples At The GMF

Sample No.	Functional Area Location	Color (Including Substrate Color)[A]	Concentration (ppm)
GMF-PB-1	Maint. support (Area 3-1)	White (yellow, blue)	5,346
GMF-PB-2	Label area (Area 3-3)	White (blue, turquoise)	77
GMF-PB-3	Breakroom (Area 3-4)	White (tan, blue)	796
GMF-PB-4	Sort area (Area 3-5)	White	39
GMF-PB-5	IPSS Room (Area 3-8)	White (yellow, blue)	6,161
GMF-PB-6	Sorting area (Area 2-1)	White	1,738
GMF-PB-7	Label room (Area 2-2)	White	29
GMF-PB-8	Sort room (Area 2-3)	White (brown, blue)	9,001
GMF-PB-9	Break room (Area 2-3)	White	108
GMF-PB-10	Break room (Area 2-4)	White	153
GMF-PB-11	Break room (Area 2-4)	White (tan)	141
GMF-PB-12	Sort area (Area 2-5)	White (brown)	8,930
GMF-PB-13	Column H-1 (Area 2-5)	Red (yellow)	5,242

a Color description assigned by Weston field personnel.

3.20 Traffic

The Site is located on the northwest corner of the intersection of 3rd Avenue South and South Lander Street in Seattle, Washington (see Section 7.0, Site Vicinity Map). South Lander Street has a moderate amount of traffic. Because 3rd Avenue South is not a direct through-street, very few vehicles use it. The current primary users are people driving into the back entrances of the fast food restaurants located on the east side of 3rd Avenue South. There is a traffic light one block to the east at the intersection of South Lander Street and 4th Avenue South.

There are several entrances to the property. The entrance to the loading docks at the south side of the GMF building is through two gates along South Lander Street. The primary entrance to the facility, including the VMF building and the loading docks on the east and north

sides of the GMF building, is located on 3rd Avenue South, just south of the intersection with South Stacy Street. The entrance to the small parking lot northeast of the VMF building is located at the north end of 3rd Avenue South, while the larger parking lot northwest of the VMF building can be entered through the main entrance or a gate at the north end of 3rd Avenue South.

There is room for approximately 750 parking spaces at the Site (CB Commercial 1997) as all of the Site not covered by buildings is paved with asphalt or concrete. In addition, part of the property is a large parking lot extending to the north of the VMF building.

3.21 Cultural Resources

The Washington Department of Archaeology and Historic Preservation has been contacted for their comment regarding the cultural resource status of the Site. Their reply will be provided when received by ICF KE. However, it is ICF KE's opinion that no cultural resources will be impacted as the GMF and VMF are both less than 50 years old and the Site has been extensively disturbed and paved since initial development was undertaken in 1954.

4.0 ENVIRONMENTAL RECORDS REVIEW

4.1 Environmental Database Search

The purpose of the environmental database search is to obtain and review reasonably ascertainable records that will help identify recognized environmental conditions on or near the Site. For this review, database information was obtained through Environmental Data Resources, Inc. (EDR) (1997) and a search of USEPA records (USEPA 1997).

4.1.1 NPL

ICF KE searched the current NPL to determine whether the Site or any site within 1-mile of the subject property is currently on the USEPA list of hazardous waste sites eligible for inclusion under the federal Superfund clean-up program. This list, generated by the USEPA, represents the higher-priority hazardous waste sites based on a clean-up priority scoring system called the Hazard Ranking System (HRS).

The Site is not listed on the NPL. No sites within a 1-mile radius of the Site were listed in the NPL database.

4.1.2 CERCLIS

The CERCLIS database lists potential hazardous waste sites that may require remediation. Suspected sites listed in CERCLIS are subjected to a Preliminary Assessment and Site Investigation. The sites are given a hazard ranking if determined to pose a hazard to human health and/or the environment.

A search of the CERCLIS database was performed. The Site was not in the CERCLIS database. No sites within a ½-mile radius of the Site were listed in the CERCLIS database.

4.1.3 FINDS

The FINDS database lists all facilities that are regulated or tracked by the USEPA. The database search includes the target property and adjoining properties.

The Site is not listed in the FINDS database. One adjoining property, the Texaco service station on the northeast corner of 3rd Avenue South and South Lander Street, approximately 100 feet to the east of the Site, is listed in the FINDS database, although no reason for this listing is given in the database report (EDR 1997). .

4.1.4 RCRIS

The federal RCRIS database includes information on facilities that generate, transport, store, treat or dispose of hazardous waste as defined by the Resource Conservation and Recovery

Act (RCRA). A search of the listed RCRA treatment, storage, and disposal facilities (TSDFs) located within 1-mile of the Site identified no RCRA TSDFs.

A search of the listed, currently registered RCRA generators identified 3 properties within the radius of concern as RCRA small quantity generators (SQGs) of hazardous waste. These nearby facilities are listed below:

- Rabanco Recycling Co. 2733 3rd Avenue South;
- Smith Kline Bioscience Labs 2603 3rd Avenue South; and
- USPS Vehicle Maintenance Facility 2460 4th Avenue South.

One facility within ¼-mile of the target Site was identified as a RCRA large quantity generator (LQG) of hazardous waste. The facility is listed below:

- Metro Power Distribution Headquarters 2255 4th Avenue South.

The RCRA facilities are not expected to impact the Site.

4.1.5 SWF/LS

A search of these databases, which are inventories of active and/or inactive solid waste management facilities or open dumps, identified one of these facilities within a ½-mile radius of the Site.

This facility is Rabanco Recycling Company, located at 2733 3rd Avenue South, approximately 500 feet south of the Site. This company recycles various materials, including paper, cardboard, aluminum, plastic, and glass.

4.1.6 ERNS/HMIRS

A search of these federal oil and hazardous substance spill reporting databases by EDR did not identify any such incidents at the Site.

4.1.7 Confirmed and Suspected Contaminated Sites List

The Confirmed and Suspected Contaminated Sites List (CSCSL) is Washington's equivalent of NPL and CERCLIS. These locations may or may not already be listed on the federal CERCLIS list. Priority locations planned for cleanup using state funds (equivalent to Superfund) are identified along with properties where cleanup will be paid for by potentially responsible parties.

The Site is not in the CSCSL database. Twenty three CSCSL waste sites were identified within a 1-mile radius of the Site. These sites are identified below:

- Langendorf Baking Co of Seattle — 2901 6th Avenue South;
- Metro Power Distribution Headquarters — 2255 4th Avenue South;
- Northwest Wire Works, Inc. — 2752 6th Avenue South;
- Pacific Iron & Metal — 2230 4th Avenue South;
- Stanley Terminals (also known as Alaska Traffic Consultants) — 2214 4th Avenue South,
- Arco 4090 — 2200 4th Avenue South,
- Alaska Copper & Brass — 3200 6th Avenue South,
- Seattle Water Department Garage — 2700 Airport Way South,
- Acme Intercity Freight — 3414 2nd Avenue South,
- Seattle City Light Storage — 3613 4th Avenue South,
- Spear Trusts Warehouse — 4001 6th Avenue South,
- Metro Central Operating Base — 1333 Airport Way South,
- Northwest Plating Company — 825 South Dakota Street,
- Port of Seattle Term. — 302715 East Marginal Way South,
- Nelson Iron Works — 45 South Spokane Street,
- MC Terminals — 40 South Spokane Street,
- GATX Tank Storage Terminals Co. — 1733 Alaskan Way South;
- Van Waters & Rogers — 4000 1st Avenue South;
- Lone Star Ind. Inc. — 3801 East Marginal Way South;
- Value Plating & Metal Polishing — 3207 11th Avenue Southwest;
- Weyerhaeuser Seattle Lab Undev. — 3233 11th Street Southwest;
- Seattle Iron & Metals Corp. — 2955 11th Avenue Southwest; and
- Pacific Molasses Company — 3200 11th Avenue Southwest.

However, only those locations within ¼-mile of the Site have the potential to impact the Site due to physical separation and the low hydraulic gradient. A summary of the five remaining properties within ¼-mile of the Site is given below.

- Langendorf Baking Co. of Seattle, located at 2901 6th Avenue South.
  No information on hazardous waste was available on this location. See Section 4.1.8 for a description of LUST issues at the site.

- Metro Power Distribution Headquarters, located at 2255 4th Avenue South.
  No information from WDOE files was available on this location.

- Stanley Terminals, located at 2214 4th Avenue South.
  (also known as Alaska Traffic Consultants)
  No information on hazardous waste was available on this location. See Section 4.1.8 for a description of LUST issues at the property.

- Pacific Iron & Metal, located at 2230 4th Avenue South.
  No information on hazardous waste was available on this location. See Section 4.1.8 for a description of LUST issues at the property.

- Arco 4090, located at 2200 4th Avenue South.
  No information on hazardous waste was available on this location. See Section 4.1.8 for a description of LUST issues at the property.

4.1.8 UST/LUST Lists

State UST registration records searched by EDR listed no registered USTs at the Site. The identified UST at the Site (see Section 3.1) is not registered as it is a heating oil UST and therefore exempt.

Three adjoining properties had registered USTs. A summary of these sites is given below.

- Exxon 7-9532 (Closed), located at 2401 4th Avenue South.
  This property is the current location of McDonalds on the west side of 4th Avenue South, approximately 100 feet east of the Site. The property had four waste oil and fuel tanks (EDR 1997), some of which were leaking. The tanks and contaminated soils (see the LUST site summaries below) were removed.

- Texaco #63-232-0043, located at 2461 4th Avenue South.
  This service station is on the northwest corner of 4th Avenue South and South Lander Street, approximately 100 feet east of the Site. The property has five operational USTs, all made of plastic/fiberglass (EDR 1997). Three store gasoline, one heating fuel, and one unspecified contents. One steel waste oil UST was being deactivated according to the last file update. There have been some spills from the tanks and piping at this location; see the LUST site summaries below for more information.

- Metro Power Distribution Headquarters, located at 2255 4th Avenue South.
  This property is located on the northeastern boundary of the Site. The property has one operational steel UST storing approximately 4,000 gallons of gasoline (EDR 1997). The tank was installed in 1991. Three small capacity (< 1000 gallons) USTs storing diesel fuel and one approximately 4,000 gallon UST storing gasoline have been removed from the location. Removal dates are not specified.

The Washington State database of LUST incidents searched by EDR listed no such incidents at the Site. However, there are several known LUST incidents that have occurred. These incidents were investigated and remediated to varying degrees (refer back to Section 3.1 for a discussion of LUSTs at the Site).

A search of the LUST incident database revealed 27 LUST properties within ½-mile of the Site. These properties are listed below:

- Newall Properties — 2730 4th Avenue South;
- Western Petroleum — 2739 4th Avenue South;
- Hoehne, Inc. — 2763 4th Avenue South;
- Texaco #63-232-0043 — 2461 4th Avenue South;
- Exxon 7-9532 (Closed) — 2401 4th Avenue South;
- Friction Services, Inc. — 555 South Lander Street;
- Northwest Motor Repair — 2930 6th Avenue South;
- Langendorf Baking of Seattle — 2901 6th Avenue South;
- Metro Power Distribution Headquarters — 2255 4th Avenue South;
- Alaska Traffic Consultants (also known as Stanley Terminals) — 2214 4th Avenue South;
- Arco 4090 — 2200 4th Avenue South;
- Flajole Brothers, Inc. — 2201 4th Avenue South;
- Andy's Diner, Inc. — 3201 4th Avenue South;
- Evergreen Trails, Inc. — 720 South Forest Street;
- Budget Rent-A-Car — 1961-4th Avenue South;
- Burger King — 3301 4th Avenue South;
- City of Seattle Water Department — 2700 Airport Way South;
- Lee & Eastes Tank Lines, Inc. — 2418 Airport Way South;
- Publix Fruit & Produce Co., Inc. — 2415 Airport Way South;
- Jack in the Box — 1907 4th Avenue South
- Taylor Edwards, Inc. — 1930 6th Avenue South;

- G Heileman Brewing Company — 3100 Airport Way South;
- Line Seg 51 Print — 2700 Occidental Street South;
- Chevron — 2740 1st Avenue South;
- Sears Automotive Center — 2753 Utah Avenue South;
- Crescent Foods Warehouse — 25 South Hanford Street; and
- Terminal 30 — 2431 East Marginal Way South.

However, because of physical separation from the Site and the low hydraulic gradient and velocity, only those LUST properties within ¼-mile from the Site have the likely potential to impact the Site. A summary of each of these locations is given below.

- Exxon 7-9532 (Closed), located at 2401 4th Avenue South.
  This property is the current location of McDonalds on the west side of 4th Avenue South, approximately 100 feet east of the Site. The station had leaking waste oil and fuel oil tanks that contaminated soil near the tanks with toluene and xylenes to 30 ppm and petroleum hydrocarbons to 24,000 ppm. Contaminated soils were excavated. WDOE issued a letter with a declaration of No Further Action required in June of 1988.

- Texaco #63-232-0043, located at 61 4th Avenue South.
  This service station is on the northwest corner of 4th Avenue South and South Lander Street, approximately 100 feet east of the Site. There was a spill of gasoline from a pipeline beneath a fueling island in 1992. Remedial investigations in 1993 and 1994 installed approximately 10 shallow monitoring wells and revealed elevated levels of BTEX compounds and TPH in soil around the fuel island and in ground water near several of the wells on-site. This includes two wells near the eastern boundary of the property next to 3rd Avenue South. Quarterly sampling of the wells has continued since 1994, and shown continuing levels of contaminants above regulatory standards. Although the investigations at this property measured the average ground water gradient to the east, this conflicts with other estimates of ground water flow direction (see Section 2.5). There has been no apparent excavation of soils, ground water pumping, or other remedial efforts at the Site.

- Metro Power Distribution Headquarters, located at 2255 4th Avenue South.
  This property is located on the northeastern boundary of the Site. No information from WDOE files was available on this location. The EDR report (EDR 1997) lists a spill in 1991 and records that the cleanup had been started as of the latest file update in 1995.

- Alaska Traffic Consultants, located at 2214 4th Avenue South (also known as Stanley Terminals).
  This property is located approximately 800 feet to the northwest of the Site. Four USTs were removed from the property in 1992. Approximately 290 cubic yards of oil- and fuel-contaminated soils were also removed from the UST excavations at this time, and an asphalt cap was placed over the excavations. The latest reports available indicated that the ground water may have elevated levels of TPH and BTEX compounds; apparently this possibility was never fully investigated. Ground water

was measured approximately 7 feet below ground surface and was estimated to flow to the west.

- Newell Properties, located at 2730 4th Avenue South.
  This property is located on the east side of 4th Avenue South south of South Lander Street, approximately 1,000 feet southeast of the Site. Four USTs containing petroleum products were removed in 1994, along with approximately 225 cubic yards of contaminated soil. At that time, five monitoring wells were installed at the property to monitor ground water quality. Quarterly sampling was conducted for the first year, and bi-annual sampling since 1995. There is apparently still residual petroleum contamination in the soil, as well as TPH and BTEX compound contamination in the ground water, according to a 1995 ground water monitoring report. However, contamination in the ground water has not traveled beyond the property boundaries. There has been no apparent remedial action for soil or ground water since the original soil removal in 1994.

- Flajole Brothers, Inc., located at 2201 4th Avenue South.
  This former vehicle repair site is now the location of a Taco Bell restaurant on the west side of 4th Avenue South, approximately 400 feet northeast of the Site. There were seven USTs on-site, containing gasoline, diesel fuel, and used oil, some of which leaked. The USTs were removed in 1993, and elevated levels of BTEX compounds and TPH were detected in soil and ground water at the site. Records are limited, but there was apparently never any comprehensive investigation of contamination at the property, excavation of contaminated soils, or ground water remediation.

- Arco 4090, located at 2200 4th Avenue South.
  This gas station is located approximately 1,000 feet northeast of the Site, on the east side of 4th Avenue South. Petroleum hydrocarbon contamination was detected in ground water at the location. It was suspected that the three existing USTs on site containing gasoline leaked, but this was never confirmed. The company has been monitoring ground water at the property quarterly since 1995, as well as operating an extraction system that skims phase-separated liquids from the water. Approximately eight monitoring wells at the location indicate that the highest contaminant concentrations are found around the USTs near the center of the property, although slightly elevated levels of BTEX compounds and TPH are also found in monitoring wells just west of the property and along the southern boundary. Investigations at the property concluded that the ground water gradient at the property was to the southwest. Ground water monitoring continues, and shows a general decline in TPH levels.

- Western Petroleum, located at 2739 4th Avenue South.
  This gas station is located approximately 500 feet southeast of the Site, on the west side of 4th Avenue South south of South Lander Street. Three USTs containing fuel products were removed in the early 1990s from two separate excavations. Some soil contamination was detected, and contaminated soil was excavated to the ground water table but limited laterally by various obstacles. A ground water sample collected from the excavation showed TPH levels below regulatory standards. No comprehensive investigation was completed, and no other remediation or soil excavation was conducted. It is likely that residual BTEX compounds and TPH soil and ground water contamination exists at the Site.

- Hoehne, Inc., located at 2763 4th Avenue South.
  No information on LUSTs was available for this property from WDOE files.

- Friction Services, Inc., located at 555 South Lander Street.
  No information on LUSTs was available for this property from WDOE files.

- Northwest Motor Repair, located at 2930 6th Avenue South.
  This auto repair shop is located approximately ¼-mile southeast of the Site, on the former location of the 6th Avenue landfill (no information is available on the 6th Avenue landfill). The property contained a waste oil tank and a diesel tank, both of which had apparently leaked small amounts of product. Partial cleanups of the contaminated soils associated with these leaks was carried out, primarily removing product and visibly petroleum-contaminated soils near the tanks. Soil sampling indicated residual TPH levels above MTCA cleanup levels, but the WDOE issued a letter of No Further Action.

- Langendorf Baking of Seattle, located at 2901 6th Avenue South.
  This bakery is located approximately 1,400 feet southeast of the Site. A 300-gallon waste oil UST was removed in 1992. There was some petroleum hydrocarbon-contaminated soil near the tank. No information on remedial efforts or follow-up activities is available.

- Line Seg 51 Print, located at 2700 Occidental Street.
  This property is a Burlington Northern Railroad maintenance or fueling facility located approximately 500 feet to the southwest of the Site. Two USTs were removed in May of 1994. Some TPH contaminated soil was removed from the tank excavations. Confirmation samples indicated that all contaminated soil had been removed.

- Chevron, located at 2740 1st Avenue South.
  This former gas station is located approximately 500 feet east-southeast of the Site. The station was closed and three gasoline USTs, one heating oil UST and one waste oil UST were removed in 1984. Soil borings in 1991 revealed elevated levels of TPH and BTEX compounds, and lead in the soil and ground water at the property. The contaminated soil at the station was excavated, treated on-site, and used as backfill. Confirmation samples indicated contaminant levels in the soil below MTCA levels. Quarterly ground water monitoring has continued since 1991. Levels of TPH in one well during the May 1996 sampling round were slightly above MTCA cleanup levels.

- Sears Automotive Center, located at 2753 Utah Avenue South.
  This former auto service center was located approximately ¼-mile southwest of the Site. The building at the location was torn down in 1992, and ten motor oil and waste oil storage tanks were removed. Four of the tanks had holes, and there was visibly contaminated soil. These TPH-contaminated soils were excavated following tank removal. The remedial report claimed that the property was effectively cleaned up, but sample data indicates that there was residual TPH-contaminated soil remaining. No ground water sampling or remediation was carried out.

One other LUST location within ¼-mile of the Site was discovered in WDOE files. This site is the Sears Retail and Distribution Center located in the Starbucks Center at 2465 Utah Avenue South. The LUST incident is described below:

- Sears Retail/Distribution Center, located at 2465 Utah Avenue South.
  This retail store is located approximately 500 feet west of the Site. There was a 2,000 gallon release of diesel fuel from a UST in 1984. An initial investigation revealed elevated levels of TPH in soil and ground water. No remedial activity was carried out. A 1985 remedial report hypothesized that much of the fuel had been drawn into a basement sump system that drains the adjacent building. Two monitoring wells sampled in 1993 indicated elevated levels of TPH and diesel in ground water at the property. There is likely still some TPH and BTEX compound contamination in ground water at the property.

4.1.9 Coal Gasification Sites

No coal gasification locations were identified within a 1-mile radius of the Site.

4.2 Historical Use Information

Prior to 1954, the Site was partly vegetated, undeveloped land. The current VMF and GMF buildings were constructed in 1954. There has been no major construction at the Site since that time.

The following Site historical summary is based on research by ICF KE. Dates are approximate. The Site was undeveloped tideflats prior to 1905. Between 1905 and 1910, the tideflats were filled in. The land sat vacant from 1905 until 1954 when the current GMF and VMF buildings were constructed on the property. The USPS used these facilities until February 1997, at which time the facilities were vacated, and are currently unoccupied.

4.2.1 Interviews

Ray Ubis (USPS), Raymond Hill (USPS), and Rick Osterhout (CB Commercial) supplied information concerning current and past uses of the Site property. They confirmed the above chronology for the Site.

4.2.2 Review of Aerial Photographs

Aerial photographs of the Site, obtained from the University of Washington archives, were reviewed by ICF KE. The photographs were taken in 1944, 1961, 1965, 1970, 1979, 1985, 1989, and 1995 . Photographs were not reproduced for inclusion in this report.

1944 US Army Corps of Engineers (Scale: 1 inch equals 20,000 feet): The small scale of this map makes distinguishing ground features difficult. The area in the vicinity of the Site is primarily wooded with some clearings. Main roads, including 4th Avenue South and South Lander Street, have been constructed. The Site is mostly wooded, vacant land.

1961 Pacific Aerial Surveys (Scale: 1 inch equals 4,800 feet): The former USPS GMF and VMF have been constructed on the northwest corner of 3rd Avenue South and South Lander Street. The area where the large parking lot is currently located north of the VMF

is wooded and undeveloped. Small buildings exist where McDonalds and the shopping center are now located on the west side of 4th Avenue South. More development has taken place on nearby properties.

1965 Puget Sound Regional Transportation Study (Scale: 1 inch equals 4,800 feet): The Site and surrounding properties appear the same as in the 1961 photograph, except for a few additional buildings on properties within a block of the Site. The properties where Arby's and the Texaco service station now exist have been developed.

1970 US Department of Natural Resources (Scale: 1 inch equals 12,000 feet): The Site and surrounding properties appear the same as in the 1965 photograph, except that the parking lot north of the old VMF building has been developed. There are a few additional buildings in the vicinity of the Site.

1979 US Department of Transportation (Scale: 1 inch equals 24,000 feet): The Site and surrounding properties appear the same as in the 1970 photograph, except for a few additional buildings in the vicinity. A large government warehouse is still in place where the new USPS VMF and parking garage are now located on the northeast corner of 4th Avenue South and South Lander Street.

1985 Washington Department of Natural Resources (Scale: 1 inch equals 4,800 feet): The Site and surrounding properties appear the same as in the 1979 photograph. The government warehouse where the new USPS VMF and parking garage are now located has been demolished. It appears that the property is now being used as a parking lot.

1989 Washington Department of Natural Resources (Scale: 1 inch equals 4,800 feet): The Site and surrounding properties appear the same as in the 1985 photograph.

1995 Washington Department of Natural Resources (Scale: 1 inch equals 4,800 feet): The Site and surrounding properties appear the same as in the 1989 photograph and roughly the same as they do today.

4.2.3 Review of Sanborn Fire Insurance Maps

The most recent Sanborn fire insurance map for the area (1947) indicates that the Site and properties to the north and south are undeveloped. Several nearby properties to the east and west are developed, including a lumberyard to the northeast where Metro Power Distribution Headquarters now exists; a service station to the east (possibly the Exxon station discussed in Section 4.1.8) where McDonalds now exists; an auto freight depot at the current location of Arby's; a service station where the Texaco station now exists; a small warehouse to the east where the shopping center now exists; and several warehouses, supply stores, and offices along the east side of Occidental Avenue South, west of the Site. Surrounding streets and rail lines are in place. A previous Sanborn map (1916) shows the area as vacant, undeveloped land.

4.2.4 Review of City Directories

Polk's City Directories were not reviewed for this report due to the large amount of other information on the history of the Site.

4.3 Physical Setting Information

4.3.1 Topography

ICF KE reviewed the Seattle South quadrangle, a 7.5 x 15 Minute United States Geological Survey (USGS) Topographical Map that was last revised in 1983. The Site is located between 5 and 10 feet above mean sea level in the flat former delta tideflats of the Duwamish River. These tidelands were filled soon after the turn of the century. The essentially flat land slopes very slightly to the eastern Duwamish waterway ¾-mile to the west of the Site, which was formerly a segment of the Duwamish River. A small ridge composed of glacial sediments trends north-south approximately ¾-mile to the east of the Site, just east of Interstate 5.

4.3.2 Prime Farmland

The Site is located in a highly developed industrial area of south Seattle. For this reason, as well as the fact that the Site contains fill material, the Site is not considered Prime Farmland.

4.3.3 Floodplain and Zoning Information

The Site is classified on the Federal Emergency Management Agency's (FEMA) City of Seattle floodplain insurance rate map (FEMA 1995) as Zone X (unshaded) which is defined as an area outside the 500 year floodplain.

The Site is not located in the state-regulated shoreline management zone, which is defined as an area within 200 feet of the shoreline. However, the Site is located in the federal Coastal Management Zone. In order to comply with Coastal Management Zone requirements, the City of Seattle requires that a SEPA checklist, which examines the appropriateness of development in this portion of the Coastal Zone, be submitted for all development projects with a building greater than 12,000 square feet in area or with a net gain or loss of 20 parking spaces (Seattle DCLU 1997). However, because the USPS is considering disposing of the Site, a SEPA checklist does not need to be prepared as no development by the USPS will occur.

The Site is currently zoned Industrial (Seattle DCLU 1997).

4.3.4 Rare and Threatened or Endangered Species

The Site is located in a highly industrial area of south Seattle and is surrounded by roads, transit corridors, and commercial and industrial buildings. There are no significant natural areas, including wetlands, streams, or bodies of water, left nearby. As such, it does not provide significant habitat for any species of plants or animals. In addition, the Site is currently

almost completely covered with buildings and pavement, and has been since before 1970. Future development at the Site would not affect any rare, threatened, or endangered species.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Affirmative Checklist Answers and Recommendations

Eleven items were given affirmative answers on the Environmental Checklist and are discussed below:

- Question 6 - Coastal Zone Management Area: The Site is not located in the state-regulated shoreline management zone, which is defined as an area within 200 feet of the shoreline. However, the Site is located in the federal Coastal Management Zone. In order to comply with Coastal Management Zone requirements, the City of Seattle requires that a SEPA checklist, which examines the appropriateness of development in this portion of the Coastal Zone, be submitted for all development projects with a building greater than 12,000 square feet in area or with a net gain or loss of 20 parking spaces (Seattle DCLU 1997).

- Question 10 - Seismic Hazards: The Seismic Zone Map (Uniform Building Code 1988) identifies the area as being in Seismic Zone 3. Seismic zones are designated 0 to 4, with building code structural requirements generally increasing with increasing value. There are four major faults within a 40-mile radius of the Site (Rogers et al 1996). Two of the faults have had medium-level activity during the last several years and all have the potential for significant earthquake activity.

- Question 21 - Built Prior to 1980: The GMF and VMF buildings at the Site were constructed in 1954. Due to this construction date, the building contains asbestos materials, lead in paint, and some PCB-containing ballasts. These topics are covered in detail in Sections 3.14, 3.17, and 3.18.

- Questions 22, 23, and 24 - USTs: There is one UST located on the property. The UST is a 6,000-gallon, double-walled fiberglass tank on the southwest side of the GMF building used to store diesel heating fuel. The tank was installed in 1991 and meets current regulatory standards. There has been no evidence of leakage from the storage tank. This tank is discussed further in Section 3.1 of this report. In addition, there have been at least 5 other USTs on the Site, all of which have been removed (see Section 3.1).

- Question 25 - PCBs, ACM: The Site contains PCB fluorescent light ballasts and ACM. Only a small percentage of identified ACMs are recommended to be removed. These issues are discussed in more detail in Sections 3.14 and 3.17, and in the Asbestos Survey Report - General Mail Facility, Seattle, Washington.

- Questions 26, 27, and 28 - USEPA or State Superfund or Priority Cleanup Site: The Site has had several leaks of petroleum products from USTs and hydraulic lift pits, as well as minor petroleum, lead, and PCB contamination discovered in soils at the Site. Some remedial efforts have been directed to clean up this contamination. The contamination and associated remedial efforts are discussed in more detail in Section 3.2. Because the Site is located in a highly industrialized area of Seattle, there are a number of nearby properties that are on WDOE's list of priority cleanup locations. These properties are listed and described in more detail in Section 4.1.7. However, there is minimal information available for several of these properties. There are also

several nearby properties (across 3rd Avenue South) which have been the location of remedial efforts, primarily for petroleum leaks. These sites are listed and described in more detail in Section 4.1.7 (State Hazardous Waste Sites) and Section 4.1.8 (LUSTs).

- Question 29 - High-Risk Land Use: The Site is located in a highly industrialized area of Seattle. There are many vehicle maintenance facilities, recycling and scrap facilities, industrial storage sites, gas stations, and other potential sources of soil and ground water contamination within 1- mile of the Site. Many of these land uses would be considered high risk. A number of properties that have been confirmed as locations where hazardous materials have been released to the environment are outlined in Section 4.1.

6.0 LIST OF CONTACTS INTERVIEWED BY ICF KE

Customer Service Representative
Seattle Public Utilities
(206) 684-5900
Public water supply

Raymond Hill
Manager, Maintenance Operations
USPS P&DC
10700 27th Avenue South
Seattle, Washington 98168
(206) 768-4478
Site History, current tank status and operations

Land Use technician
City of Seattle Department of Construction and Land Use (DCLU)
Seattle, Washington
(206) 684-8850
Zoning, Land use requirements, Coastal Zone Management requirements

Rick Osterhout
Vice President
CB Commercial
Seattle, Washington 98101
(206) 292-6090

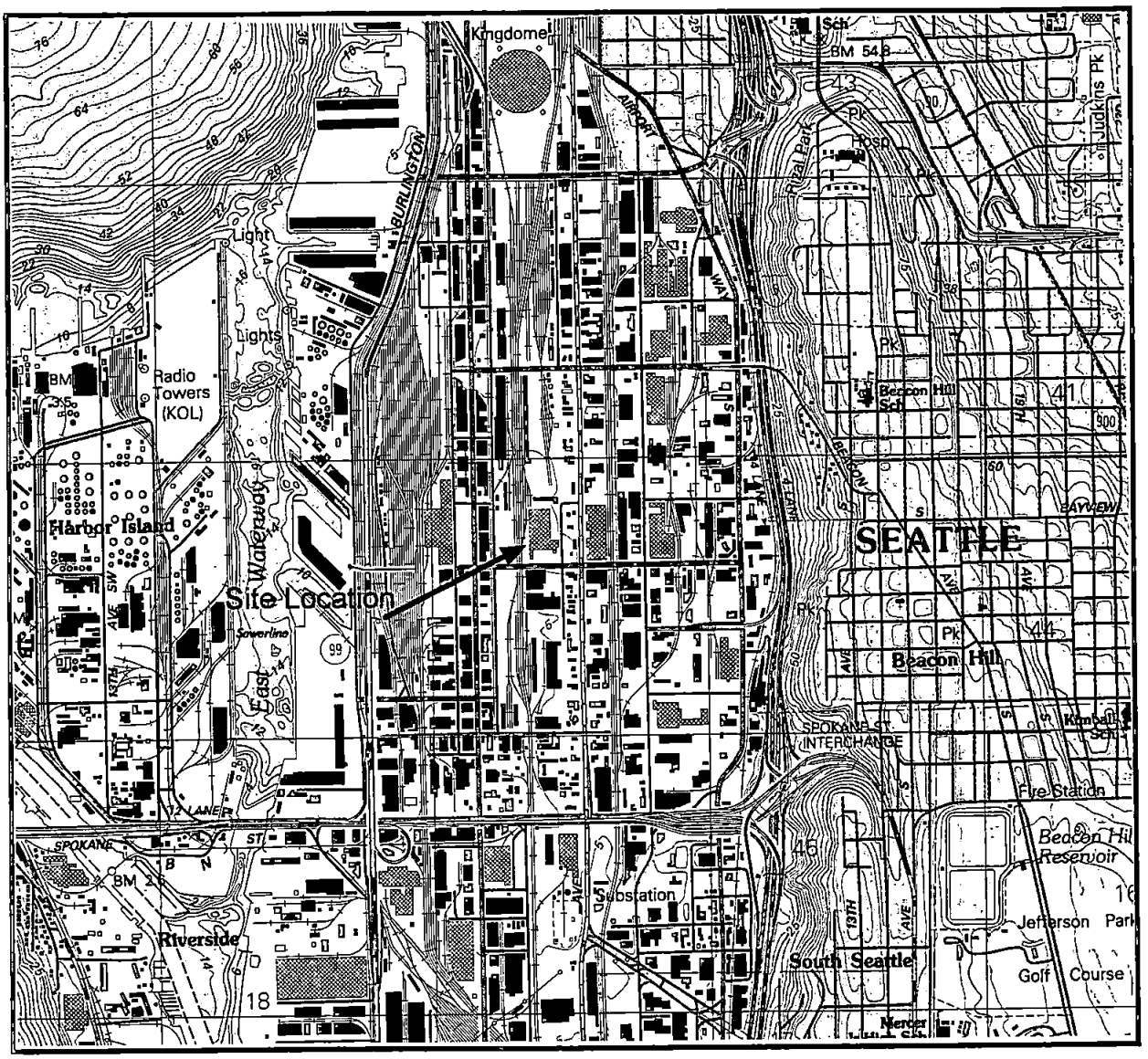
Gerry Pade
Air Pollution Engineer
Puget Sound Air Pollution Control Administration
Seattle, Washington
(206) 343-8800
Air pollution, non-attainment areas

Sally Perkins
WDOE
Northwest Regional Office
Bellevue, Washington
(425) 649-7000
Area hazardous waste sites, LUST sites, well logs

Ray Ubis
Manager, Maintenance Operations
USPS P&DC
10700 27th Avenue South
Seattle, Washington 98168
(206) 768-4474
Site History, current tank status and operations

7.0 SUMMARY OF ENVIRONMENTAL RECORDS

Site Location Map/Topographic Map

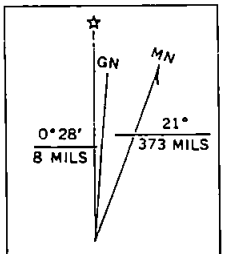


SCALE 1:25 000

1 CENTIMETER ON THE MAP REPRESENTS 250 METERS ON THE GROUND

CONTOUR INTERVAL 5 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
BATHYMETRIC CONTOUR INTERVAL 2 METERS-DATUM IS MEAN LOWER

DECLINATION DIAGRAM



UTM grid convergence (GN) and 1983 magnetic declination (MN) at center of map
Diagram is approximate

SEATTLE SOUTH, WASHINGTON
N4730—W12215/7.5x15

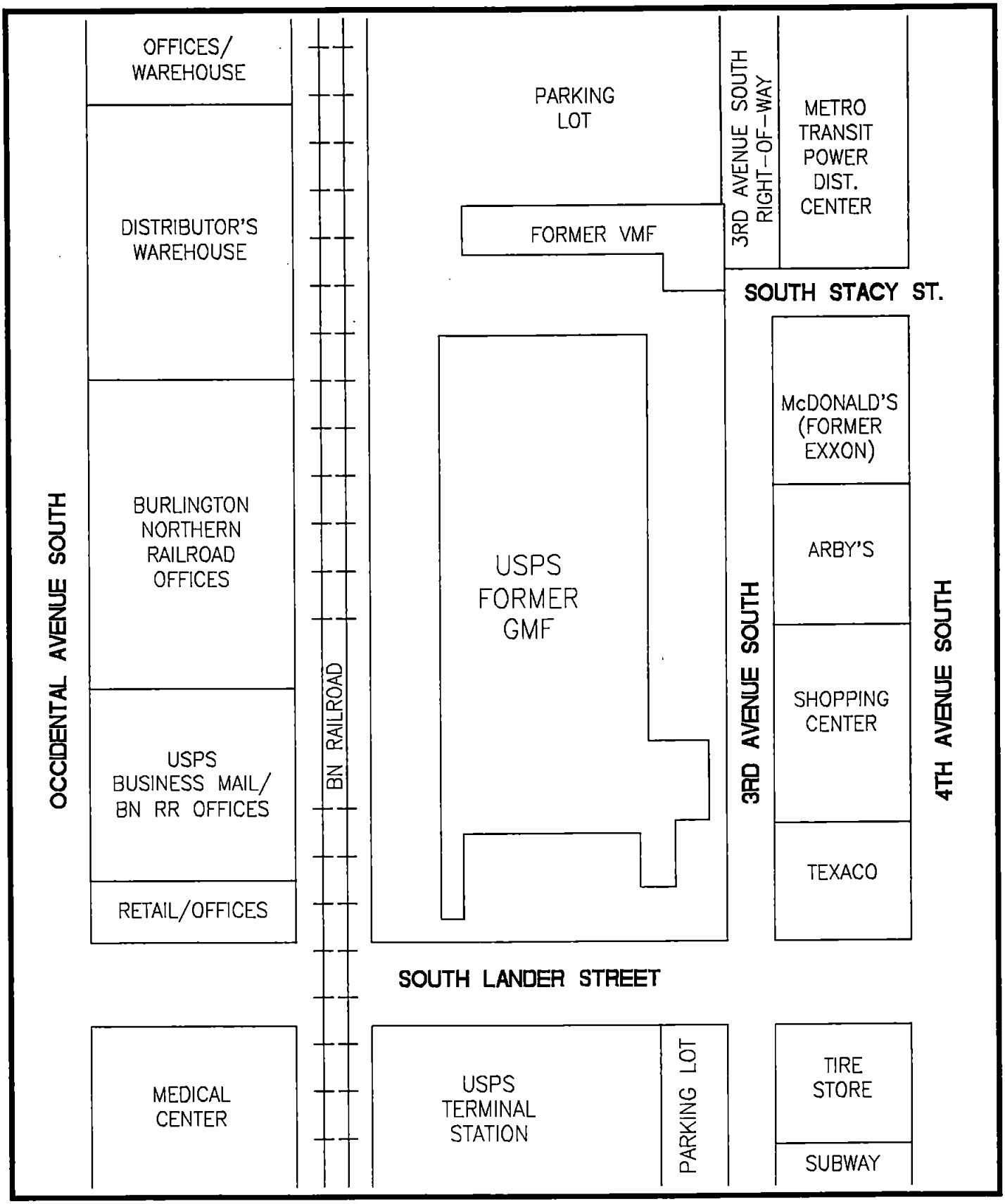
1983

Site Location / Topographic Map

USPS: GMF, Seattle, WA

ICF KAISER

Site Vicinity Map



N

ICF KAISER

1191 Second Ave.
Seattle, WA 98101

0 100 200
APPROXIMATE SCALE IN FEET

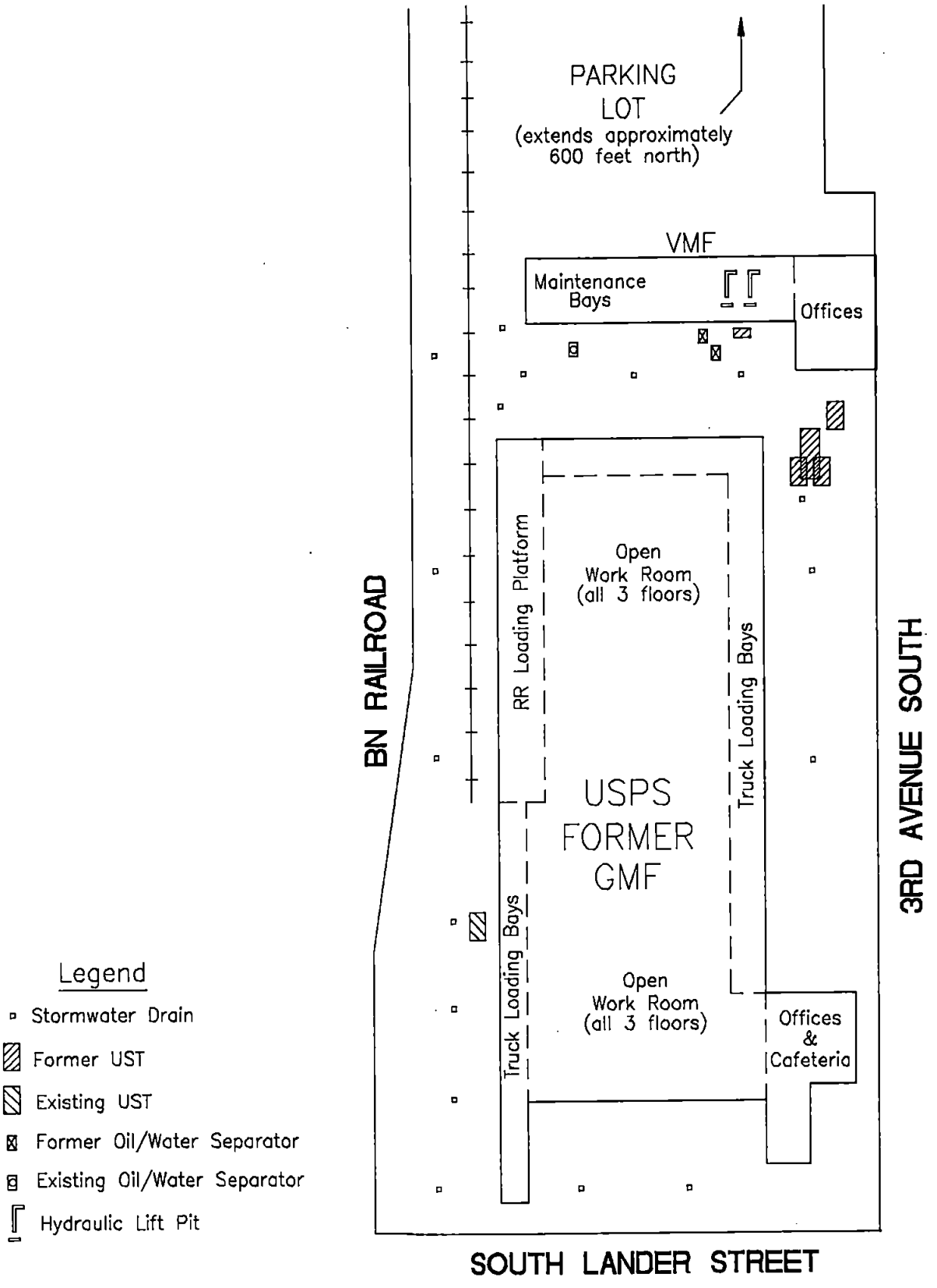
PROPERTY LINES AND BUILDING OUTLINES ARE APPROXIMATE

SITE VICINITY MAP

Client:	Location:	Project:	Date:
USPS	MDF SEATTLE, WA	51701-427-00	09/03/97

SEA-VIC

Site Plot Plan



ICF KAISER

1191 Second Ave.
Seattle, WA 98101

SITE PLOT PLAN

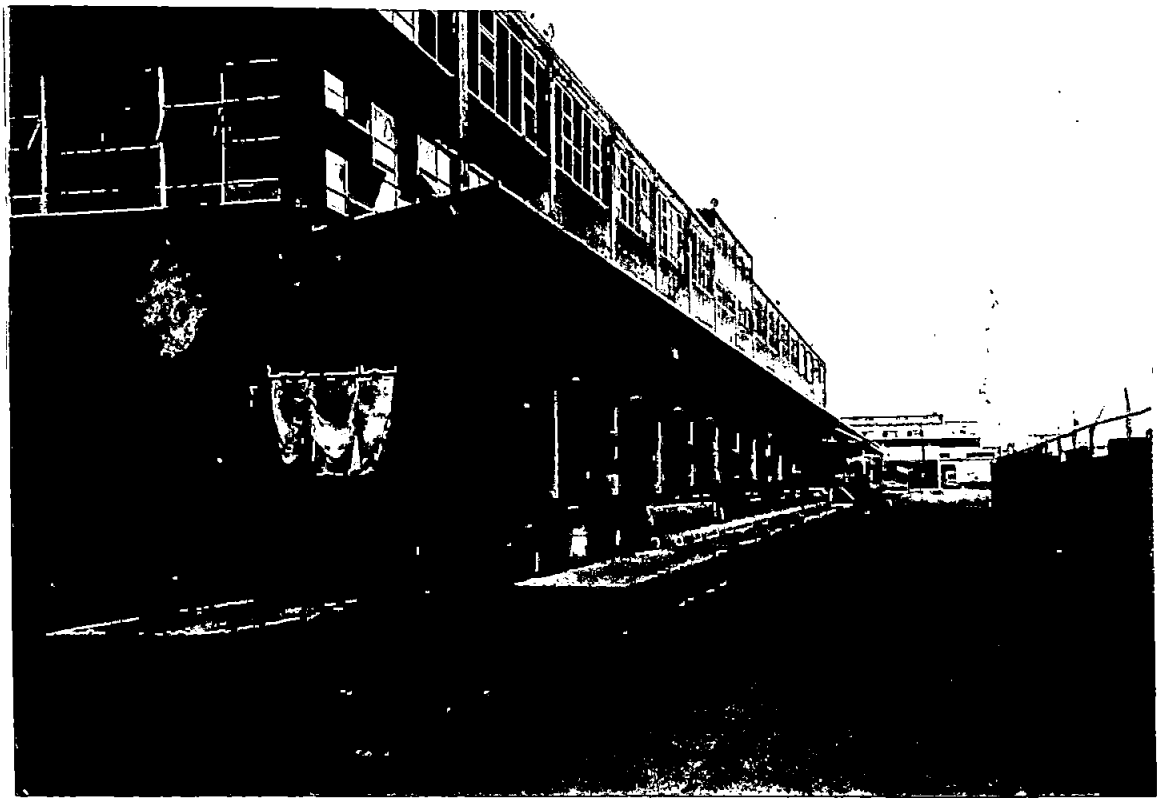
Client:	Location:	Project:	Date:
USPS	GMF SEATTLE, WA	51701-427-00	09/20/97

0 100 200

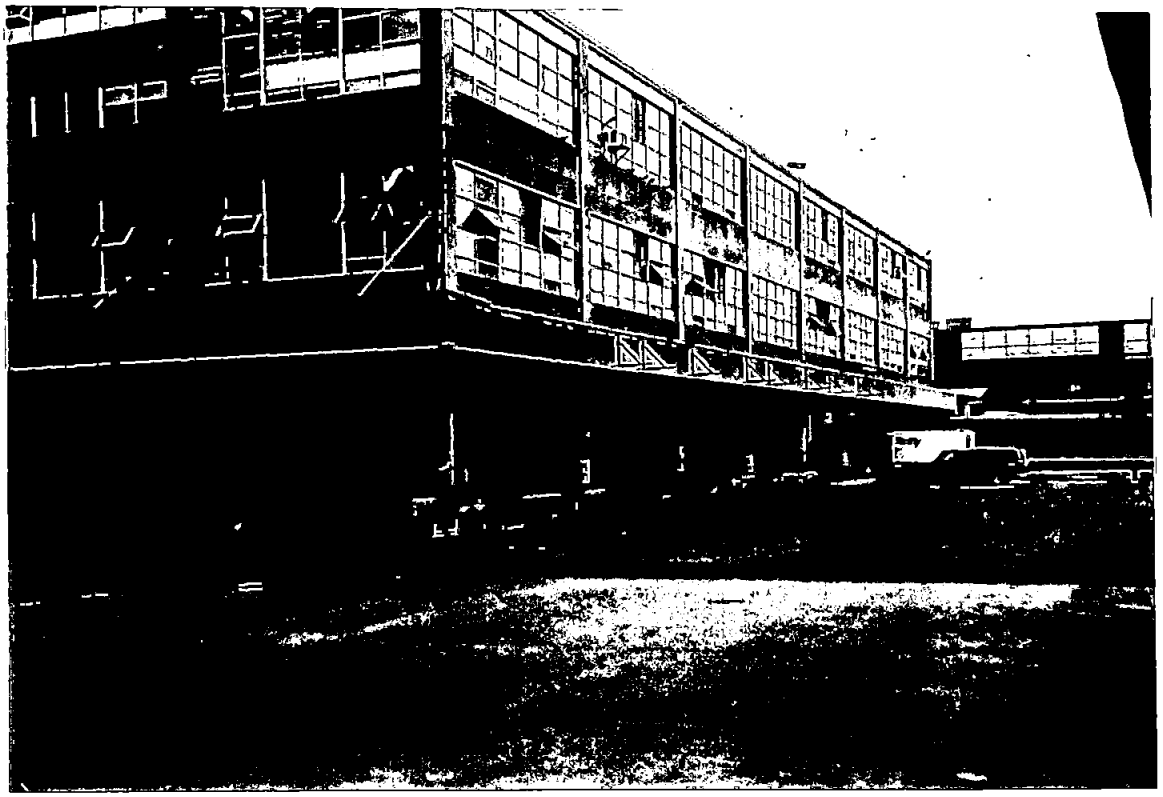
APPROXIMATE SCALE IN FEET

SEA-PLT

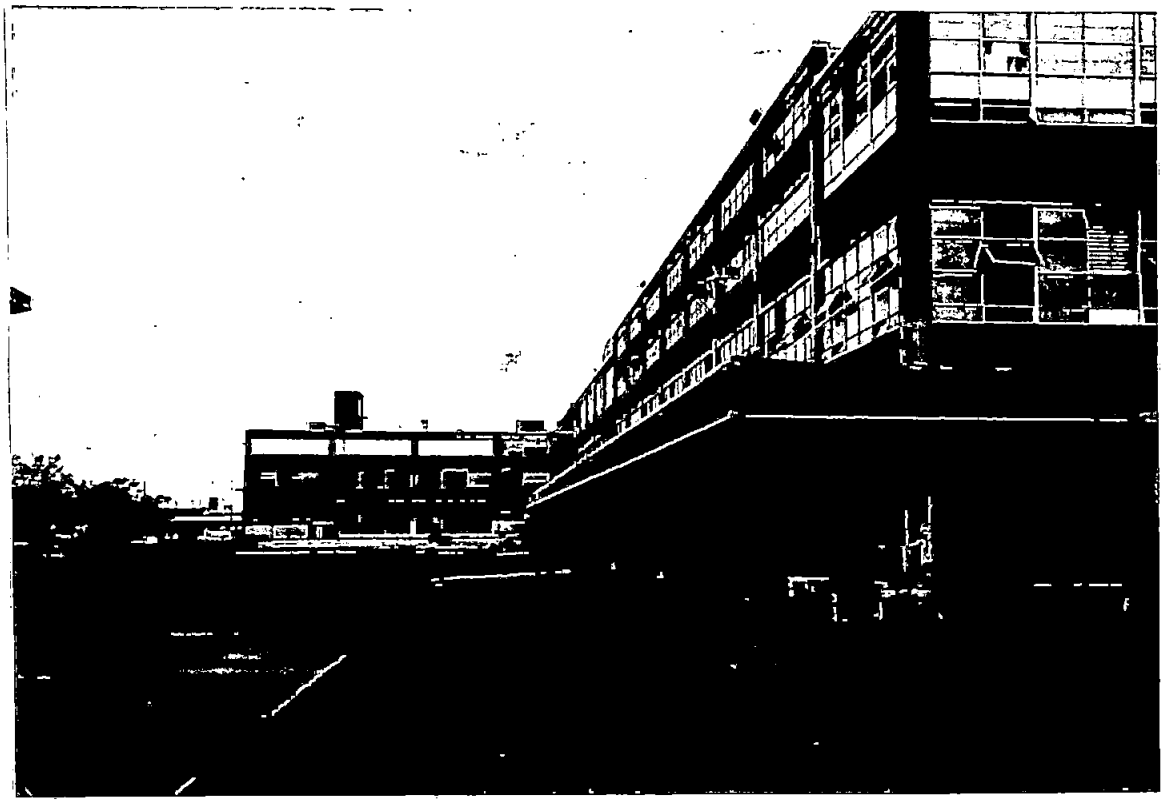
Site Photographs



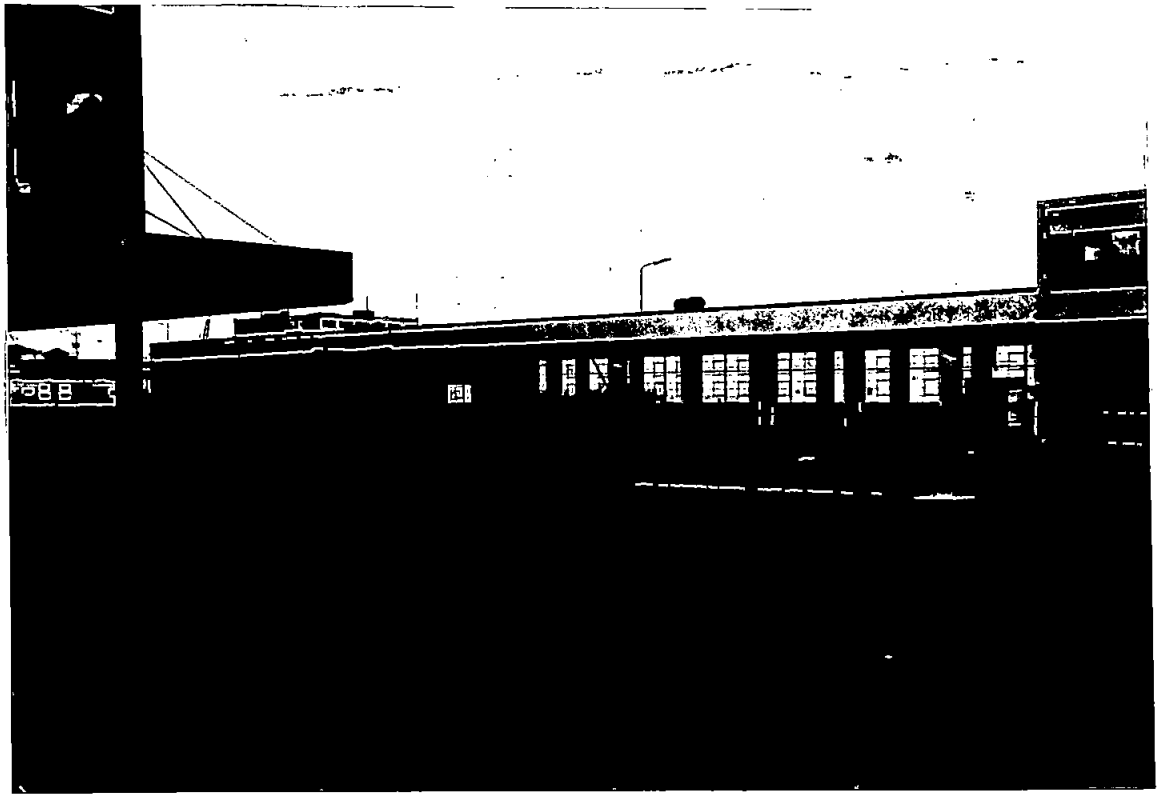
Photograph 1: View to the south along the west side of the GMF building. The railroad loading platform occupies this corner of the building, and AOC #5 is located just beyond the left side of the photograph.



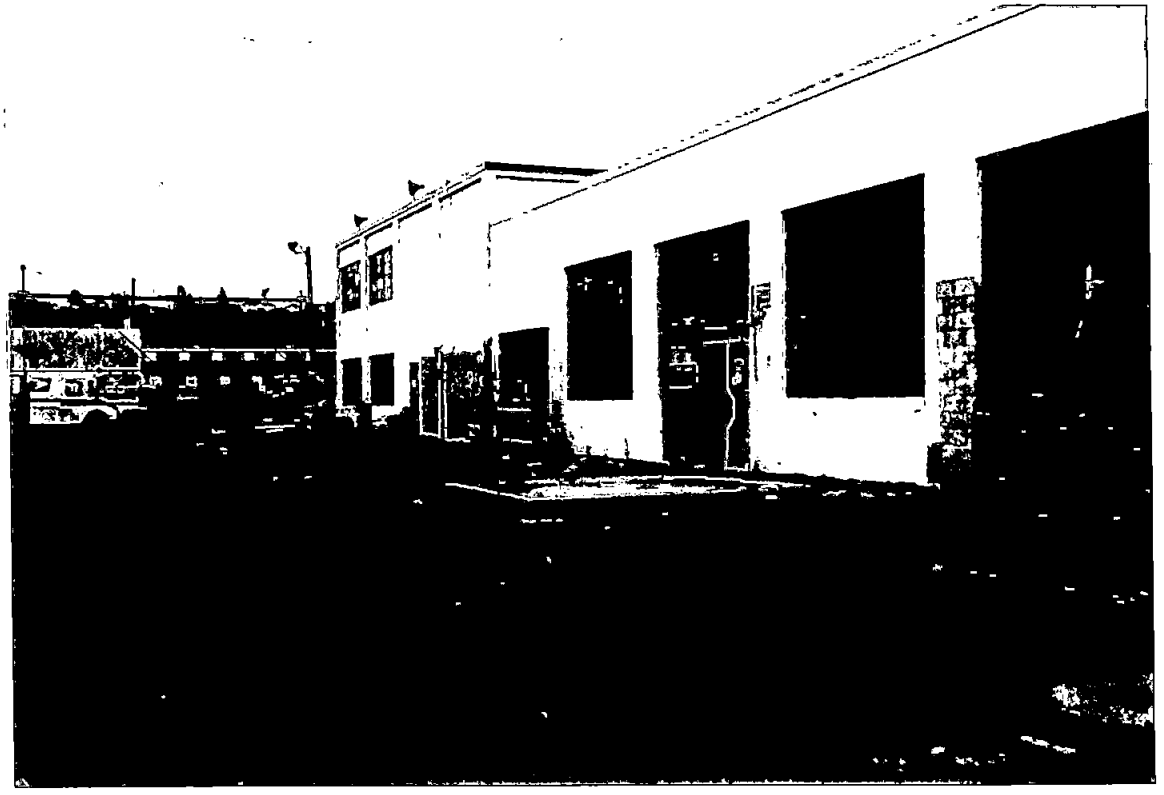
Photograph 2: View to the west along the north side of the GMF building. AOC #1 is located in the foreground. Truck loading platforms are located along both visible sides of the building.



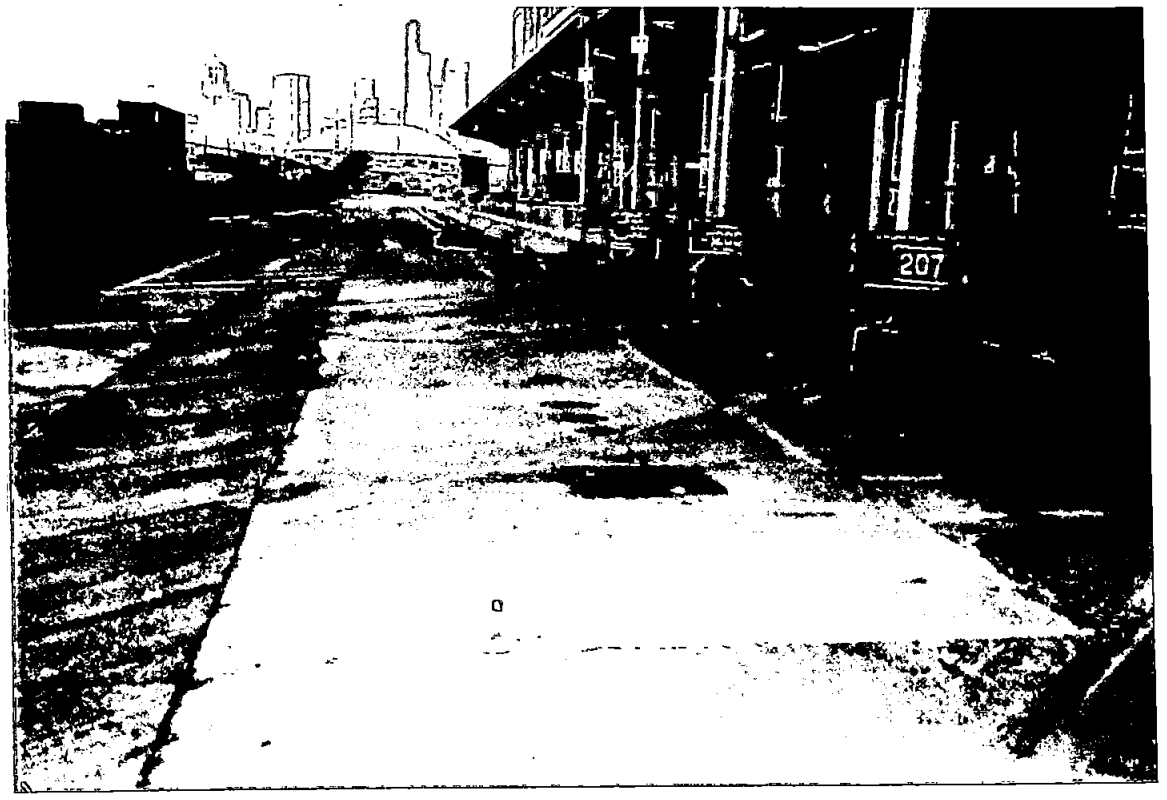
Photograph 3: View to the south along the east side of the GMF building. AOC #1 is in the left side of the photograph.



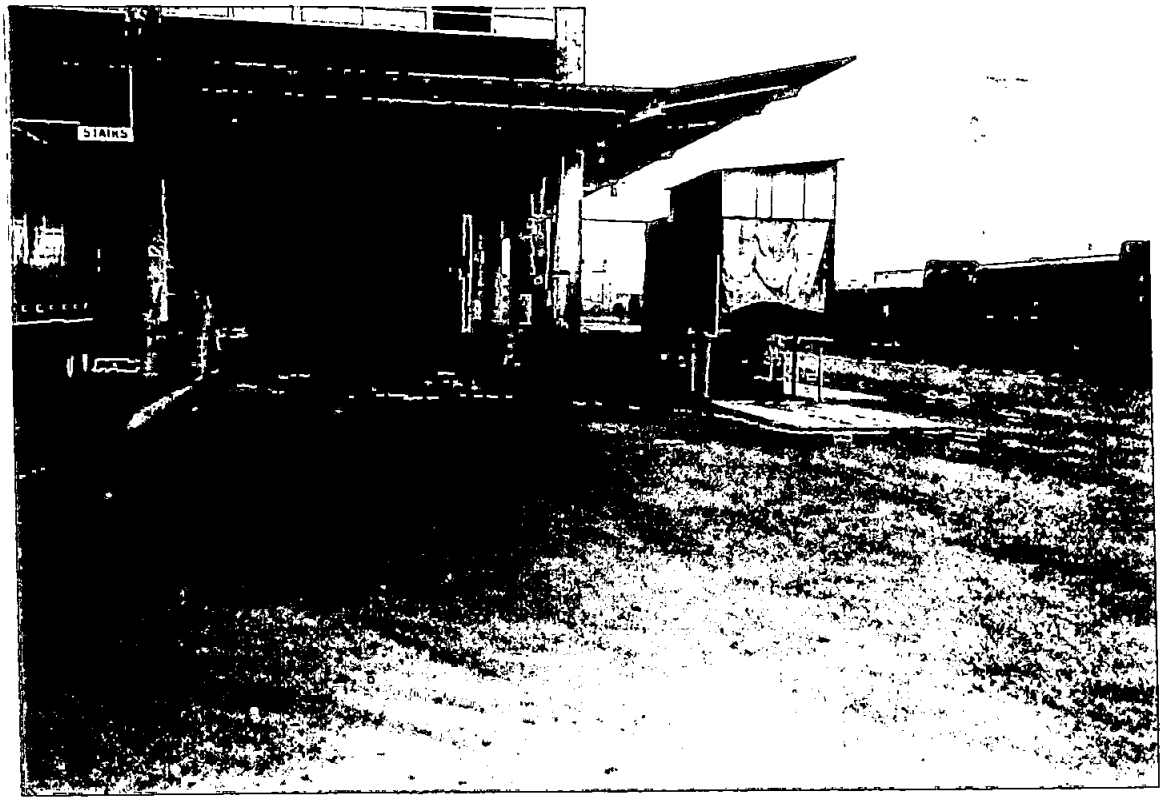
Photograph 4: View to the northwest towards the VMF building. The northeast corner of the VMF building is visible in the left side of the photograph. AOC #1 is located in the foreground, and AOC #2 toward the right side of the photograph in front of the VMF building.



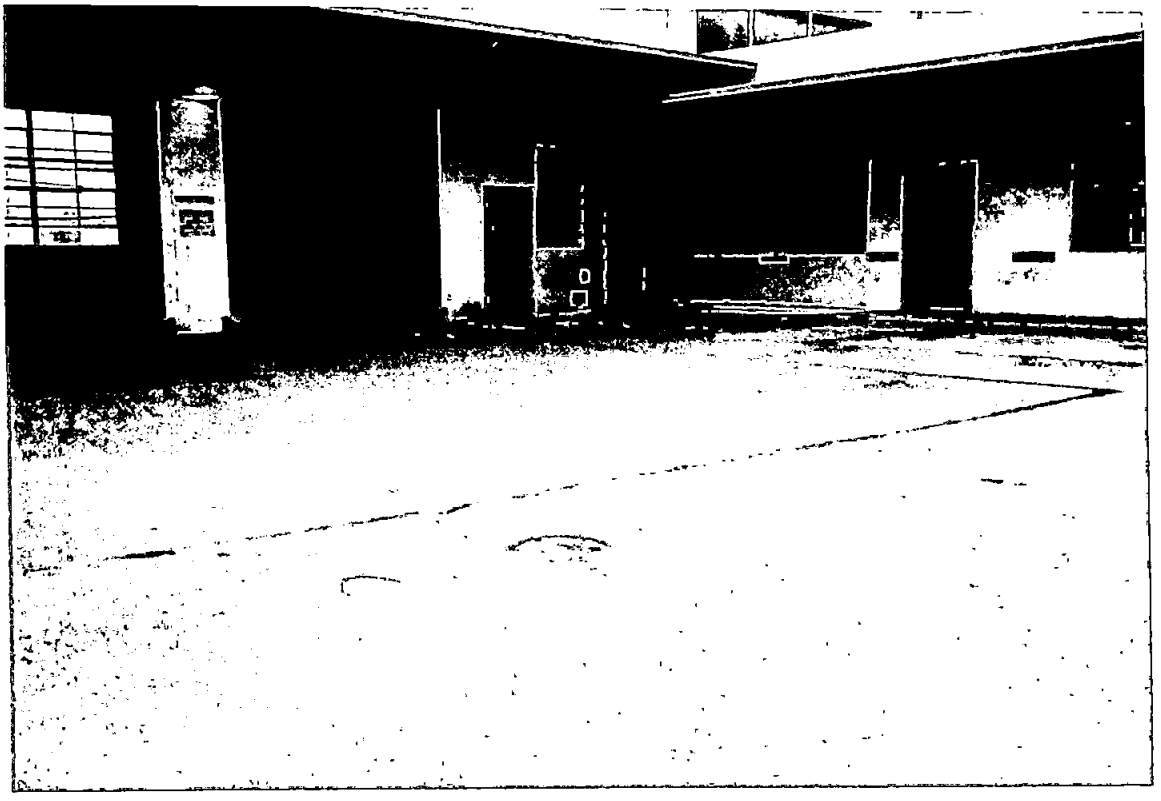
Photograph 5: View to the east along the north side of the VMF building.



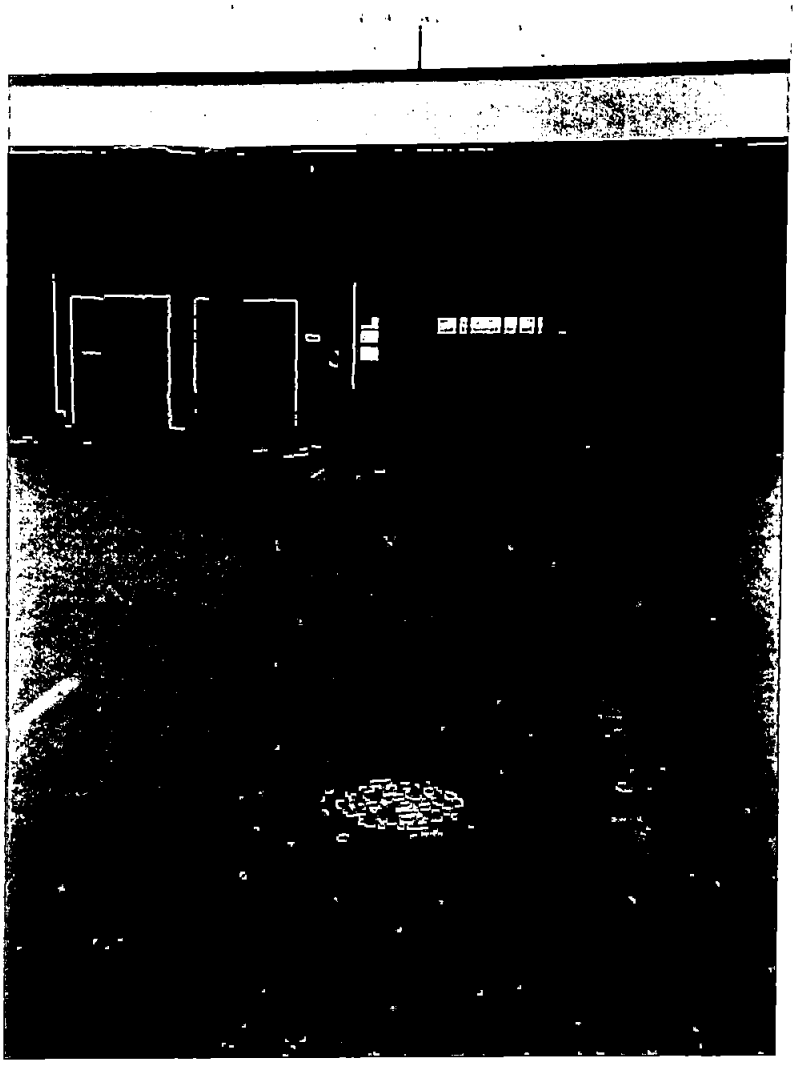
Photograph 6: View to the north along the west side of the GMF building. AOC #4 is located in the foreground. The edges of the new concrete are visible and define the approximate edge of the excavation. See Figure 2 for a more detailed description of features.



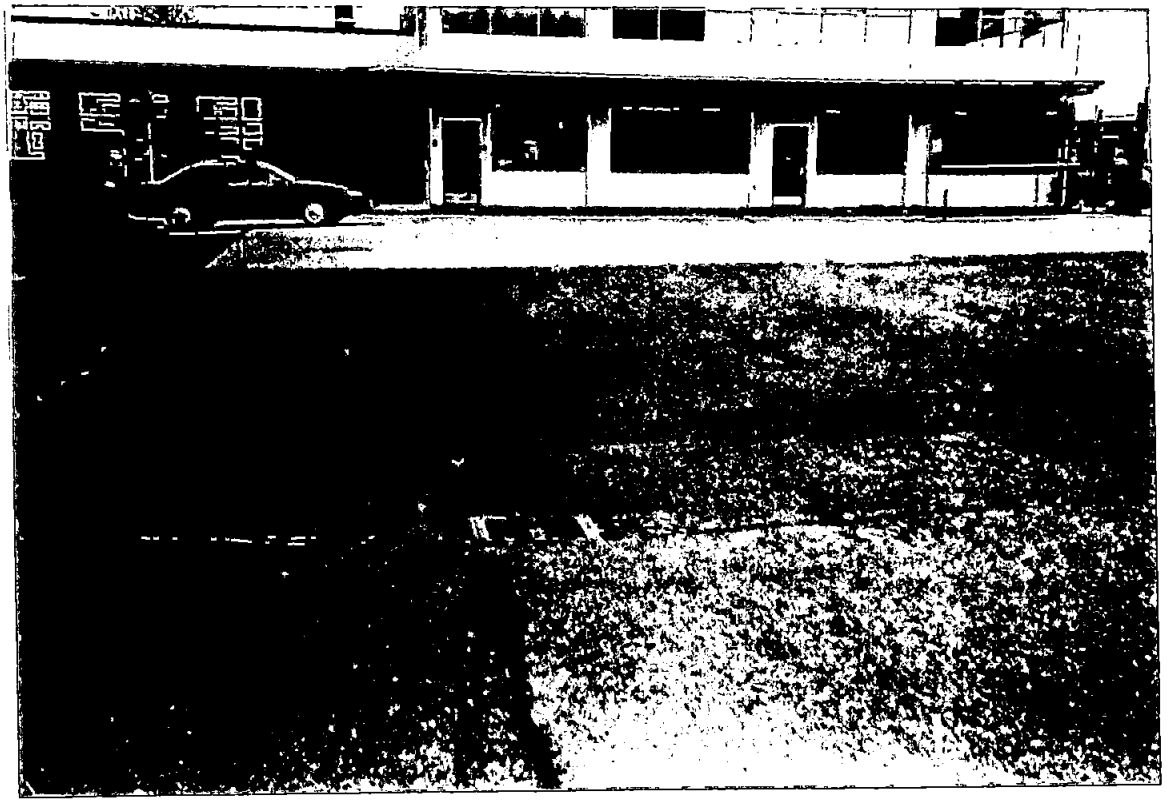
Photograph 7: The northwest corner of the GMF building and railroad loading platform. The dark empty space in the background is the location of a railroad loading spur shown in Figure 3. AOC #4 is visible in the foreground, where the edge of the new asphalt is the approximate edge of the excavation.



Photograph 8: View to the northeast towards inside of the "L" of the VMF building. The two underground hydraulic lift pit were located in the two bays seen in the left side of the photograph, and AOC #2 is seen in the foreground, where the edge of the new asphalt is the approximate edge of the excavation.

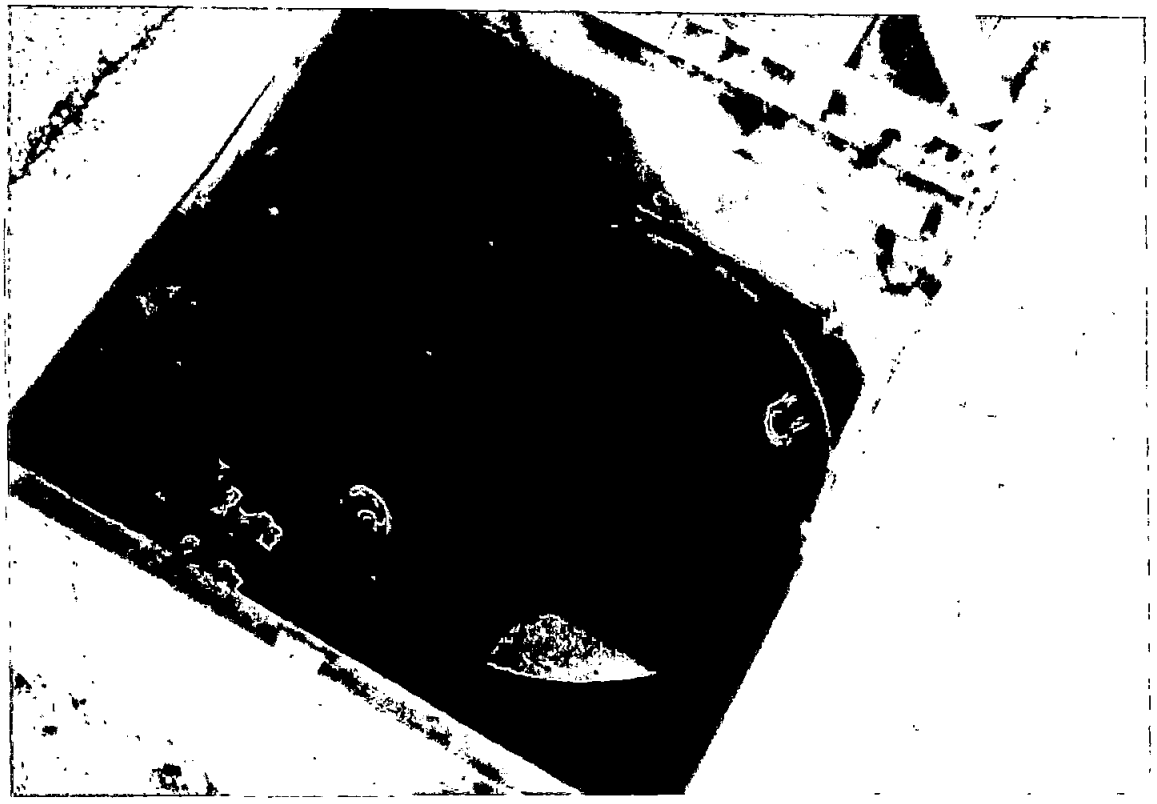


Photograph 9: View to the north of the west end of the VMF building. The existing oil/water separator is located below the rectangular metal plate in the background, while its connection to the storm sewer can be noted by the new asphalt to the manhole in the foreground.



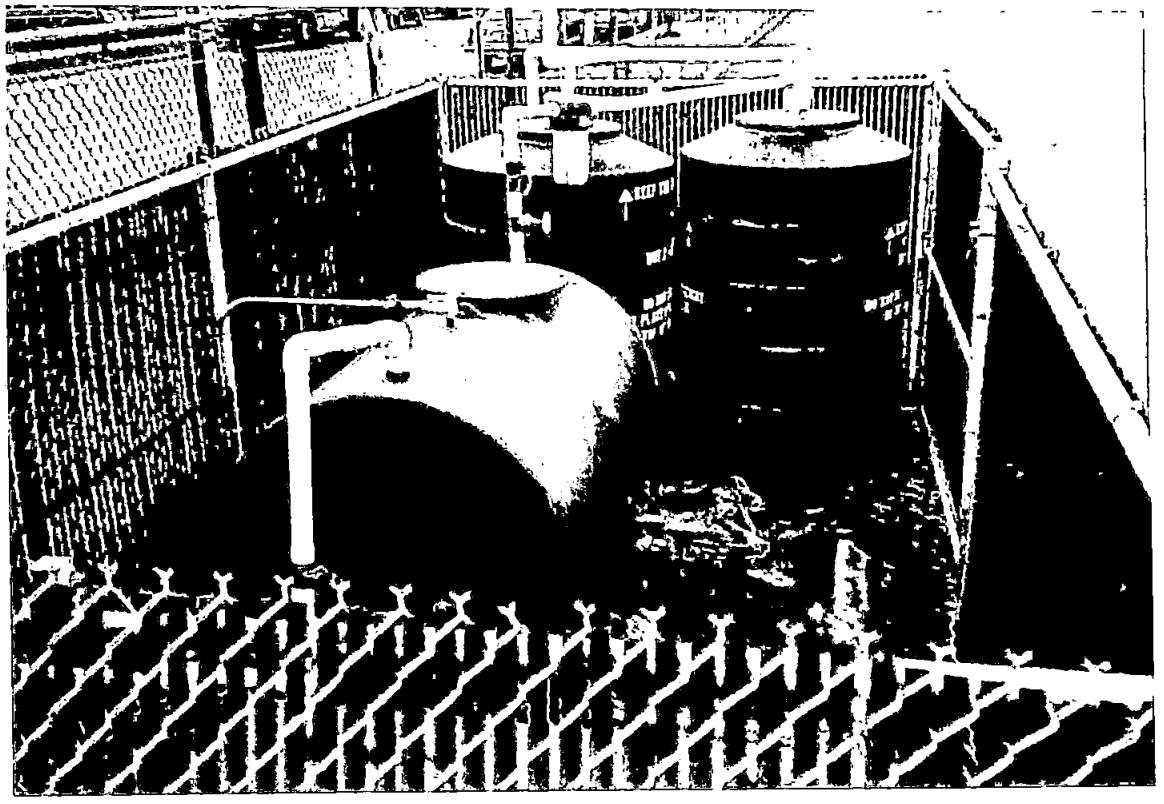
Photograph 10: View to the north towards the east end of the VMF building. AOC #1 can be seen in the foreground, including a stormwater drain in the center of the photograph, a UST observation well to the left of the drain, and capped MW-2A to the right of the drain.

Photograph 11: View to the northeast towards the east end of the VMF building. The north end of AOC #1 can be seen in the foreground, including the extraction well beneath the square metal plate in the right side of the photograph, a UST observation well just to the left of the extraction well, and another UST observation well in the left foreground.



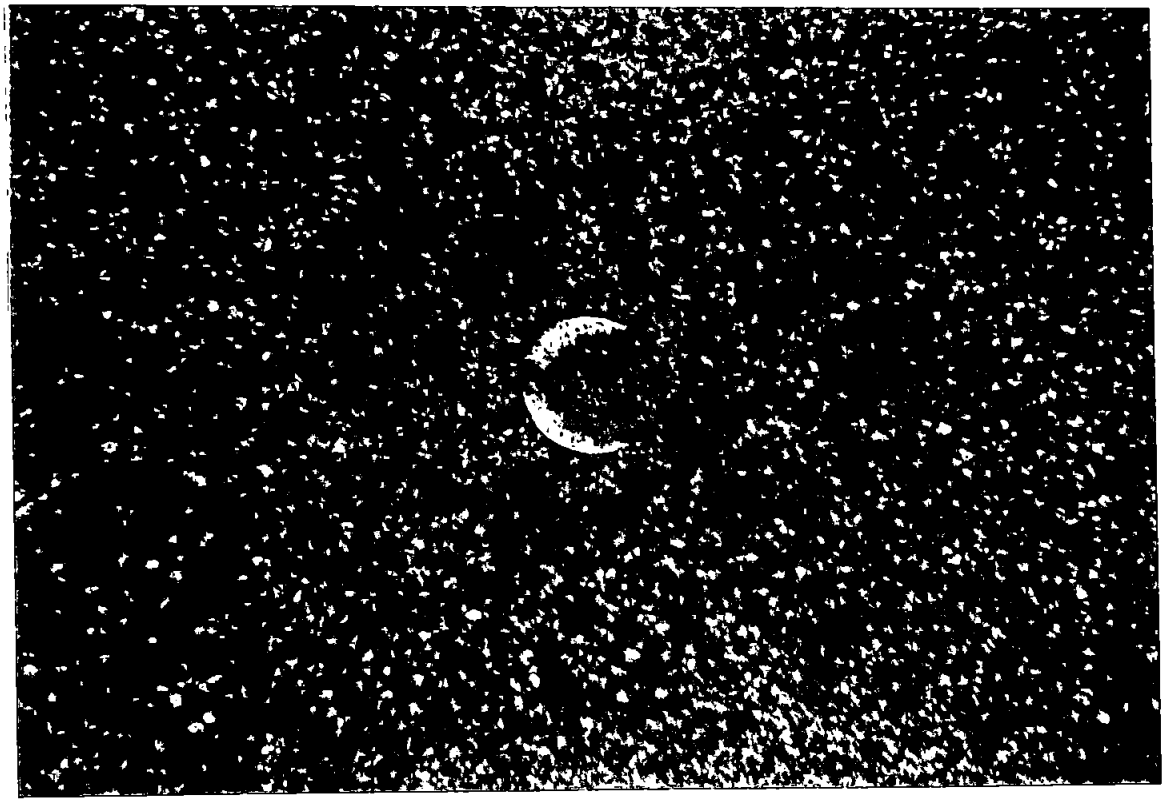
Photograph 12: A closeup of the extraction well, as shown in Photograph #11.

Photograph 13 The underground hydraulic lift pits in the east end of the VMF building. The floor drain that was used to dispose of waste oil can be seen just to the left of center near the leftmost lift pit.



Photograph 14: The groundwater treatment system still in place on the east side of the Site. The treatment system was used for several months in 1987 before it was shut down.

Photograph 15: Close-up view of a UST observation well. The wells are closed with a removable PVC cap and have an oil sensing probe in place.



Photograph 16: One of the monitoring wells sealed with a metal cap in concrete.

8.0 ENVIRONMENTAL CHECKLIST

U.S. Postal Service

Environmental Checklist

Project	FORMER GENERAL MAIL FACILITY
Address (No., Street, City, State, ZIP + 4)	2445 3rd AVENUE SOUTH, SEATTLE, WA 98134
Site Size	approx. 12.11 acres
Proposed Building Size	existing building footprints 112,000 and 30,000 sq. ft.

General Environmental Characteristics *(Reference callouts are in parentheses)*

	(Check One)	
1. Does site contain, or is there the potential to affect wetlands? *(1,3)*	[ ] Yes	[X] No
2. Can the project construction activities impact a nearby wetland? *(1,3)*	[ ] Yes	[X] No
3. Is the site, or any portion of it, in a 100-year floodplain? *(1,2)*	[ ] Yes	[X] No
4. Can the project construction activities impact a 100-year floodplain? *(1,2)*	[ ] Yes	[X] No
5. Does the site contain prime farmland? *(1)*	[ ] Yes	[X] No
6. Is the site within a Coastal Zone Management Area? *(1)*	[X] Yes	[ ] No
7. Does the site contain critical habitat or rare/endangered species? *(1)*	[ ] Yes	[X] No
8. Does the site contain slopes greater than 15%? *(1)*	[ ] Yes	[X] No
9. Does the site require extensive grading or fill? *(1)*	[ ] Yes	[X] No
10. Is the site affected by seismic hazards? *(1)*	[X] Yes	[ ] No
11. Will the site development impact aquifer recharge? *(1)*	[ ] Yes	[X] No
12. Are drinking supply wells within 500-feet of the site? *(1)*	[ ] Yes	[X] No
13. Is the water table within 3-feet of the surface? *(1)*	[ ] Yes	[X] No
14. Is the project inconsistent with zoning or surrounding land uses? *(1)*	[ ] Yes	[X] No
15. Do sensitive receptors (residences, institutions, schools, day care facilities) exist within 1/4 mile of the proposed site? (Noise/Air Quality) *(1)*	[ ] Yes	[X] No
16. Does the site have access constraints? *(1)*	[ ] Yes	[X] No
17. Is the site located near a congested intersection(s)? *(1)*	[ ] Yes	[X] No
18. Is the public transit located further than 1/4 mile from the site? *(1)*	[ ] Yes	[X] No
19. Is the property within a Historic District, or on a local, state, or National Register? *(1)*	[ ] Yes	[X] No
20. Have archaeological artifacts been recovered from or adjacent to the site? *(1)*	[ ] Yes	[X] No
21. Was the building built prior to 1980? *(1,4)*	[X] Yes	[ ] No
22. Does the site presently have underground storage tanks (USTs)? *(1,4)*	[X] Yes	[ ] No
23. Any evidence of USTs such as vent pipes, fill caps, etc.? *(1,4)*	[X] Yes	[ ] No

General Environmental Characteristics *(Continued)*

	(Check One)	
24. Have USTs ever been located on the property? *(1,4)*	[X] Yes	[ ] No
25. Does the site/building contain PCB electric transformers, urea formaldehyde, or friable asbestos? (Note: A visual inspection is required for friable asbestos. If it is suspected, a follow-up test is required to be conducted in accordance with MI EL 810-85-5, *Friable Asbestos-Containing Materials Control Program.*) *(1,4)*	[X] Yes	[ ] No
26. Is the site on or near an EPA or State Superfund or priority cleanup site? *(1,4)*	[X] Yes	[ ] No
27. Has any hazardous/toxic waste remediation ever taken place at adjacent properties? *(1,4)*	[X] Yes	[ ] No
28. Do past uses of site suggest that toxic or hazardous materials may have been present? *(1,4)*	[X] Yes	[ ] No
29. Are there high risk land uses on or near the site? *(1,4,5)*	[X] Yes	[ ] No
30. Has the site ever been filled with refuse materials? *(1,4)*	[ ] Yes	[X] No
31. Is there evidence of stressed vegetation or surface soil stains? *(1,4)*	[ ] Yes	[X] No
32. Are there ponds, pits, sumps, or ditches with suspicious color or smell? *(1,4)*	[ ] Yes	[X] No
33. Are there suspicious drums, cans, or indications of buried waste? *(1,4)*	[ ] Yes	[X] No
34. Are there curb cuts, footings, or other signs of former buildings on the site? *(1,4)*	[ ] Yes	[X] No
35. Do the water pipes and/or water supply appurtenances within the building (i.e., water coolers) contain lead concentrations above those specified by the Environmental Protection Agency (EPA)? *(1,4)*	[ ] Yes	[X] No
36. Does the building or water supply contain radon levels above the EPA action level? *(1,4)*	[ ] Yes	[X] No
37. Are there any other environmental concerns about the site indicated by records, chain of title, enforcement actions, aerial photographs, or interviews? *(1,4)*	[ ] Yes	[X] No
38. Does the project have any extraordinary circumstances which may cause it to have a significant environmental effect? *(1)*	[ ] Yes	[X] No

Action Required *(Check One)*

I. No affirmative answers were given on this checklist and therefore, no further NEPA review is necessary. *(This checklist must be placed in the project file.)*	[ ]
II. An affirmative answer was given to one or more questions on this checklist and a determination of the need for further environmental studies will be made with the FSC Environmental Coordinator.	[X]

Checklist Completed By	Date *(Month, Day, Year)*
DANIEL WHITE	AUGUST 30, 1997
Title	*(Area Code)* Telephone Number
GEOLOGIST	(206) 521-5968

References

1. HBK RE-6, *Environmental and Intergovernmental Review Procedures*, 332.
2. HBK RE-6, CH. 4.
3. HBK RE-6, CH. 5.
4. HBK RE-6, CH. 6.
5. HBK RE-6, Appendix A.

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