

**WORK PLAN
Storm Water Monitoring**

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**



March 26, 2003

Prepared by:

EnviroLogic Resources, Inc.
PO Box 80762
Portland, Oregon 97280-0762
(503)768-5121
www.h2ogeo.com

March 26, 2003
10077.005

Oregon Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue
Suite 400
Portland, Oregon 97201-4987

VIA Hand Delivery

Attention: Anna Coates

**Subject: Work Plan, Storm Water Monitoring
Astoria Area-Wide Petroleum Site
Astoria, Oregon
DEQ ECSI File #2277**

Dear Ms. Coates:

Enclosed are three bound and one unbound copies of the above-referenced document. This work plan is being submitted to you on behalf of the Astoria Area-Wide PRP group as described in "RI/FS and IRAM Development Work Plan, Phase 1," dated July 15, 2002. These investigations have been conducted under DEQ Order No. ECSR-NWR-01-11.

Please call me at (503)768-5121 if you have any questions or comments.

Sincerely,
EnviroLogic Resources, Inc.

Thomas J. Calabrese, R.G.
Principal/Hydrogeologist

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Ms. Anna Coates
March 26, 2003 (updated)
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**ASTORIA AREA-WIDE PETROLEUM SITE
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**WORK PLAN
STORM WATER MONITORING**

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

March 26, 2003

**Prepared for:
Astoria Area-Wide PRP Group**

Prepared by:

EnviroLogic Resources, Inc.
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Portland, Oregon 97280-0762
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**WORK PLAN
STORM WATER MONITORING**

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

March 26, 2003

EnviroLogic Resources, Inc., of Portland, Oregon, has prepared this work plan.

EnviroLogic Resources, Inc., Project No. 10077.005

By

Melanie N. Hance
Project Geologist

Thomas J. Calabrese, RG, CWRE
Principal/Hydrogeologist
Project Manager

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**WORK PLAN
STORM WATER MONITORING**

**Remedial Investigation/Feasibility Study (RI/FS)
Astoria Area-Wide Petroleum Site
Astoria, Oregon**

1.0 INTRODUCTION

The purpose of this work plan for storm water monitoring is to present our current understanding of the storm water catchments and their outfalls, and the proposed monitoring program to evaluate surface water pathways at the Astoria Area-Wide Petroleum Site. The Oregon Department of Environmental Quality (DEQ) issued a unilateral order requiring the investigation and potential cleanup of properties in an area near the Port of Astoria in Astoria, Oregon. The Order (DEQ Unilateral Order No. ECSR-NWR-01-11) was issued to several of the current and former facility operators, property owners, and leaseholders that have engaged in industrial and commercial activities. ChevronTexaco Products Company (ChevronTexaco), Delphia Oil Company (Delphia), McCall Oil and Chemical Company (McCall), Ed Niemi Oil Company (Niemi Oil), Flying Dutchman and Harris Enterprises (Harris/Van West), Port of Astoria (the Port), Qwest Communications International (Qwest), and Shell Oil Company (Shell), collectively potentially responsible parties (PRPs), are identified in the Order and have agreed to comply with its requirements. This work is being done under the Order and this document represents an addendum to the July 15, 2002, RI/FS Work Plan (*EnviroLogic Resources*, 2002b) prepared for investigations at the site. The site location is shown on Figure 1.

In fall 2002, Phase 1 field activities were conducted at the site in accordance with the RI/FS Work Plan (*EnviroLogic Resources*, 2002b). As part of the Phase 1 field activities a geophysical survey was completed on portions of the site, one goal of which was to map the storm water piping system. This piping system is shown on Figure 2. *EnviroLogic*

Resources has reviewed the results of the geophysical mapping along with additional information obtained during the Phase 1 field activities and compiled a storm water catchment map, presented on Figure 3. Based on this map and our understanding of the piping, *EnviroLogic Resources* has identified two outfalls for monitoring. This work plan includes a brief discussion of the updated information, the rationale used to select the two outfalls for monitoring, and a presentation of the monitoring program.

As part of the Phase 1 RI/FS field activities GeoPotential, Inc., of Gresham, Oregon, conducted subsurface geophysical mapping at the site. Storm drain piping, sanitary sewer piping, and combined sewer piping were included in the mapping as well as an attempt to determine storm drainage areas. A copy of the geophysical report is presented in Appendix A. In addition to the geophysical survey, site observations, catch basin mapping, and site surveying assisted in determining storm water catchment areas. Conversations with Port personnel and additional utility map review also provided supplemental information. In particular a 1986 map showing storm water piping features south of Slip 2 and the Storm Water Pollution Control Plan (SWPCP) for the Port (TRT Engineering, 2002), were of assistance. The maps/plans are included in Appendices B and C, respectively.

2.0 STORM WATER DRAINAGE CATCHMENTS

The catchment areas identified for outfalls at the Astoria Area-Wide Site are presented on Figure 3. The delineation of the catchment areas is based on a compilation of information and represents our best understanding of the site drainage features. The Port SWPCP identified numerous outfalls and specifically labeled what are interpreted to be active outfalls (Appendix C). We have used the same outfall labeling system and numbered additional outfalls #11, #12, #13a, #13b, and #14. Other additional minor outfalls identified were left unlabeled. Although piping has been observed in the locations of these additional outfalls (labeled and unlabeled) there is no indication these outfalls are currently active. Piping could have been altered or abandoned and water (if any) discharging from the outfalls could represent flow from ground-water discharge or rainwater infiltration. Outfall locations are presented on Figure 2. The six catchments and their interpreted outfalls are:

- **Catchment 1** -- The first catchment area is defined as those catch basins draining Pier 3, the former Astoria Oil Services facility, and possibly the eastern most portion of the Former McCall bulk fuel facility. The outfalls for this catchment are located along Pier 3; one at the very north end of the Pier (Outfall #1), one midway out the Pier on the west side (Outfall #11), and one at the south end of the pier that discharges into Slip 2 (Outfall #12). All three outfalls appear to drain the same piping system.
- **Catchment 2** -- The second catchment area includes the former Mobil/Niemi Oil bulk fuel facility and the area northwest of the Port office building including the Port maintenance shop. This area discharges to four outfalls; outfall #2 (at the base of Pier 2) and three outfalls along the southern bank of Slip 2. Outfall #2 drains the area between the Port office and shop and the area northwest of the Port office. The three outfalls along Slip 2 are labeled Outfall #13a, Outfall #13b, and Outfall #14. It remains unconfirmed whether the pipes identified as Outfalls #13a, #13b, and #14 are storm water discharge pipes or whether they are former fuel pipelines. Historical maps appear contradictory and the geophysical mapping was unsuccessful at

discriminating the trace of these pipes. Outfalls #13a and #13b appear to drain the area west of the Port Shop and both outfalls appear to discharge from the same piping system. Outfall #14 appears to drain only one catch basin located near the shore of Slip 2 west of the Port Shop.

- **Catchment 3** -- A third catchment area is defined as Pier 2. Five outfalls have been identified on Pier 2. Outfalls #3 and #4 drain into Slip 1 and two unlabelled outfalls drain into Slip 2. Although Outfalls #3 and #4 are located near a sanitary sewer (Figure 2) there is no indication the outfalls discharge to the sewer. Each outfall appears to drain relatively small areas.
- **Catchment 4** -- A fourth catchment area is defined as the area east of the Port offices, including the former water tower location, the former steel works, the former Shell Oil bulk fuel facility, and a limited area at the southwest end of Pier 1. Outfalls #5, #6, and #7 are associated with this catchment area and each outfall appears to drain a separate area. Outfall #5 drains the area adjoining the northwest side of the Port office building including the former water tower location. Outfall #6 drains the vicinity of the former steel works and the former Shell Oil bulk fuel facility. Outfall #7 drains the area at the base of Pier 1.
- **Catchment 5** -- The fifth catchment area is the area south of Industry Street that includes the Delphia Oil, Chevron/Young's Bay Texaco, Harris/VanWest, Niemi Card Lock and Qwest sites. Also included is drainage from the north/south portion of Portway and portions of the Red Lion Hotel property. It is our understanding this is a combined sanitary and storm sewer piping. The outfall is located on the west bank of the West Mooring Basin near the west side of the Red Lion. Discharge to the outfall only occurs in an overflow situation. The outfall is labeled the City Sewer System Outfall.
- **Catchment 6** -- The sixth catchment area is a portion of the Red Lion parking lot that discharges to the West Mooring Basin.

3.0 OUTFALL SELECTION AND MONITORING

Based on the areas drained, the areas of focus for the RI/FS, off-site contribution to drainage, and outfall accessibility, Outfall #2 in Catchment Area 2 and Outfall #6 in Catchment Area 4 have been selected for monitoring. Outfall #2 in Catchment 2 was selected because it drains the north-central portion of the Astoria Area-Wide site. Outfall #6 in Catchment 4 was selected because it drains the central portion of the Astoria Area-Wide site. The remaining catchments do not represent areas of investigative interest or are serviced by a combined sanitary and storm sewer system.

On January 14, 2003, while conducting monthly water level monitoring, *EnviroLogic Resources* attempted to field locate Outfall #2 and Outfall #6 in anticipation of future monitoring. With assistance from Mr. John Anderson (Port maintenance manager) Outfall #6 was easily located, but Outfall #2 could not be found. To assist in finding Outfall #2 we inspected the first catch basin upstream of Outfall #2. Observations of the piping in this catch basin indicate a different piping layout than presented on previous maps. This field interpretation of the piping layout is presented on Figures 2 and 3. Port maintenance personnel then used tracing dye (Norlab, Inc., brand) to assist in locating the outfall. The outfall was not located but tracing dye was observed emanating from the riprap on the bank of Slip 2. Based on these field observations, Outfall #2 cannot be sampled as it discharges, but a sample can be obtained from the first catch basin located upstream of the outfall. The location of the proposed sampling point/catch basin is shown on Figure 2.

On January 14, 2003, the location of Outfall #6 was confirmed in the field. Outfall #6 was observed to issue from an opening in the sheet-pile wall in Slip 1. An approximately 12-inch diameter steel pipe protrudes from the sheet pile wall. The outfall appears to be active and a sample can be obtained from the outfall pipe using a rope and an open-topped sample container (i.e., a dedicated bucket-type device).

Catchments 1 and 3 were not selected for monitoring because they primarily drain the piers, which are not a focus of the RI/FS. Catchment Area 5 was not selected for monitoring because it includes roadway/traffic drainage and the storm piping is combined with the sanitary sewer in this area so it is not representative of site run off conditions. Catchment Area 6 was not selected because it does not drain a portion of the site that is a focus of the RI/FS.

4.0 QUARTERLY STORM WATER SAMPLING

Storm water discharge from the Outfall #2 sample point and from Outfall #6 will be sampled in accordance with the RI/FS Work Plan to evaluate contributions to storm water discharges from petroleum-related potential sources (*EnviroLogic Resources, 2002b*). Storm-water samples will be collected on a quarterly basis in a manner consistent with the Astoria Area-Wide Field Sampling Plan (Appendix A of the RI/FS Work plan), and analyzed for the following constituents and parameters:

PARAMETER	ANALYTICAL METHOD
RBDM VOCs	EPA 8260B
RBDM PAHs	EPA 8270
Total Copper	EPA 6010/200.7
Total Lead	EPA 6010/200.7
Total Zinc	EPA 6010/200.7
pH	EPA 150.1
Total Suspended Solids	EPA 160.2 or ASTM D3977
Oil and Grease	EPA 1664
Floating Solids	Visual
Oil and Grease (sheen)	Visual

An estimation of flow rate will be made at Outfall #6 for all sampling events. Sample data will also include pH, temperature, specific conductance, and visual observations for the presence of oil and grease sheen and floating solids at both sampling points.

Storm water discharges will be visually monitored on a monthly basis in accordance with Industrial General Permit 1200-Z requirements, as detailed in Section 3.1.4 of the RI/FS Work Plan. The presence or absence of an oil and grease sheen or floating solids will be recorded. Visual monitoring will also occur to evaluate the periods of non-storm discharge.

Typically we would anticipate August and September to be the months of non-storm discharge.

Storm water discharge from the selected two outfalls will be sampled on a quarterly basis. The Port has selected Outfall #1 and Outfall #6 for the sampling as part of its SWPCP (Appendix C). Therefore, Outfall #6 will be sampled by the Port as part of their biannual stormwater sampling. The Port will provide *EnviroLogic Resources* with a copy of the biannual monitoring information, which we will incorporate into submittals to DEQ. *EnviroLogic Resources* will conduct the quarterly monitoring/sampling; including the remainder of the sampling required at Outfall #6 and quarterly sampling at the Outfall #2 sample point. A copy of the NPDES permit is included as Appendix D. Quarterly storm water monitoring results will be documented in reports submitted to DEQ. In addition, the Port will submit its monitoring results to DEQ in accordance with its permit requirements and the SWPCP (Appendix C).

This work plan will be implemented upon approval from DEQ.

5.0 SUMMARY

This work plan for storm water monitoring presents the results of evaluations of the storm water piping systems and proposed sampling to characterize runoff from areas of the Astoria Area-Wide site. We will continue to refine the model of the storm water piping system as new information is developed during the investigations conducted at the site. While uncertainties regarding the true nature of the piping systems exist, the proposed sampling program is expected to provide meaningful additions to the understanding of how storm water moves across the site and its quality.

6.0 REFERENCES

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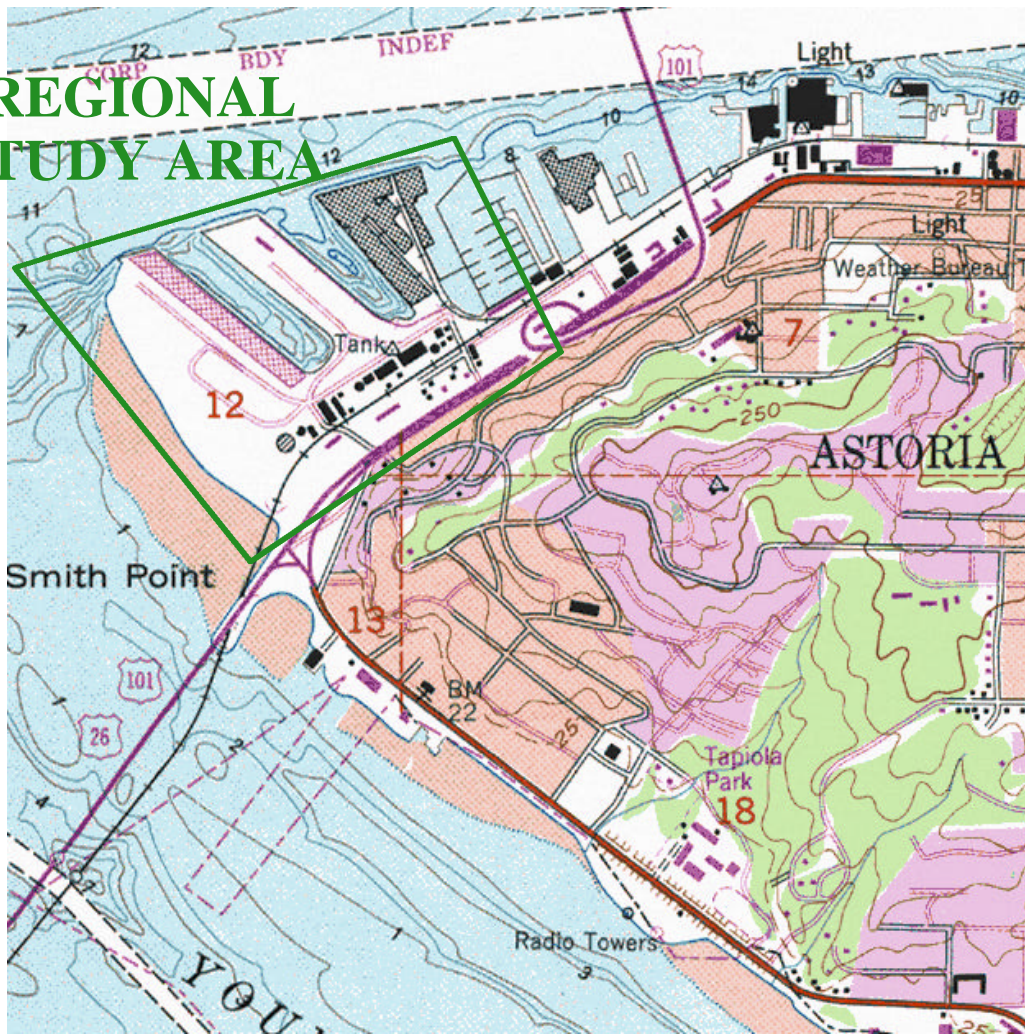
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FIGURES

REGIONAL STUDY AREA



(from USGS, Astoria {1984}, OR 7.5' Quadrangles)

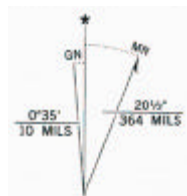
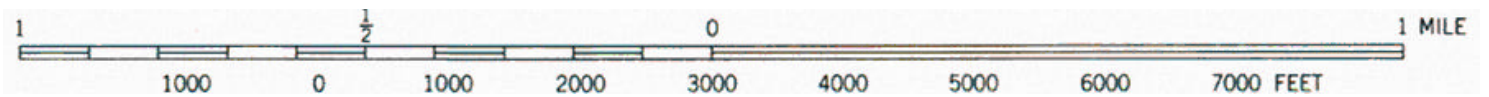


FIGURE 1

SITE LOCATION

Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon

EnviroLogic Resources, Inc.

Consulting Environmental & Water Resources Scientists

EXPLANATION

- STORM CONVEYANCE
- SANITARY CONVEYANCE
- - - COMBINED SANITARY/STORM CONVEYANCE
- CATCH BASIN

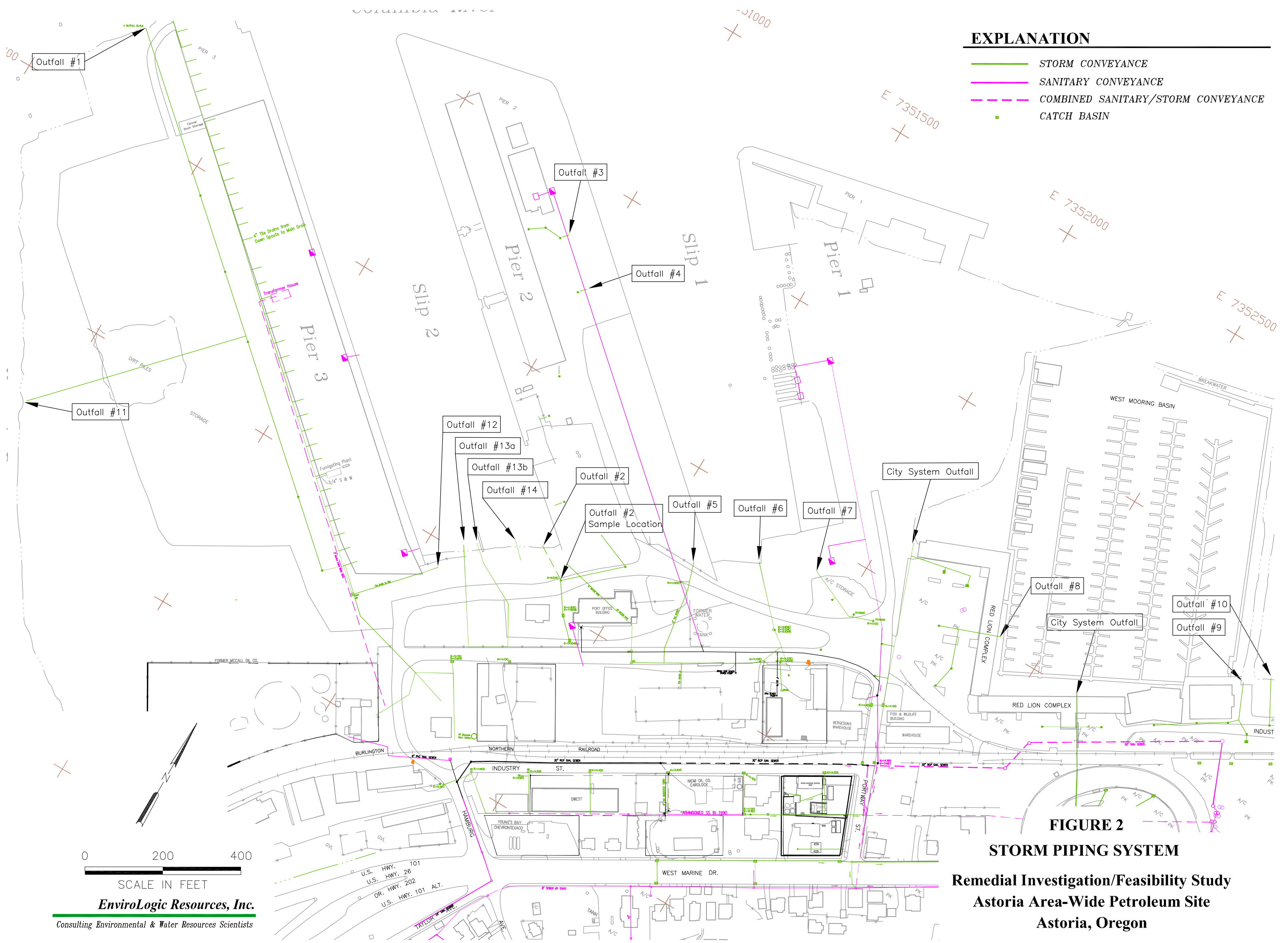


FIGURE 2

STORM PIPING SYSTEM

**Remedial Investigation/Feasibility Study
Astoria Area-Wide Petroleum Site
Astoria, Oregon**



EnviroLogic Resources, Inc.
Consulting Environmental & Water Resources Scientists

Columbia River

EXPLANATION

- STORM CONVEYANCE
- SANITARY CONVEYANCE
- - - COMBINED SANITARY/STORM CONVEYANCE
- APPROXIMATE CATCHMENT AREA
- CATCH BASIN

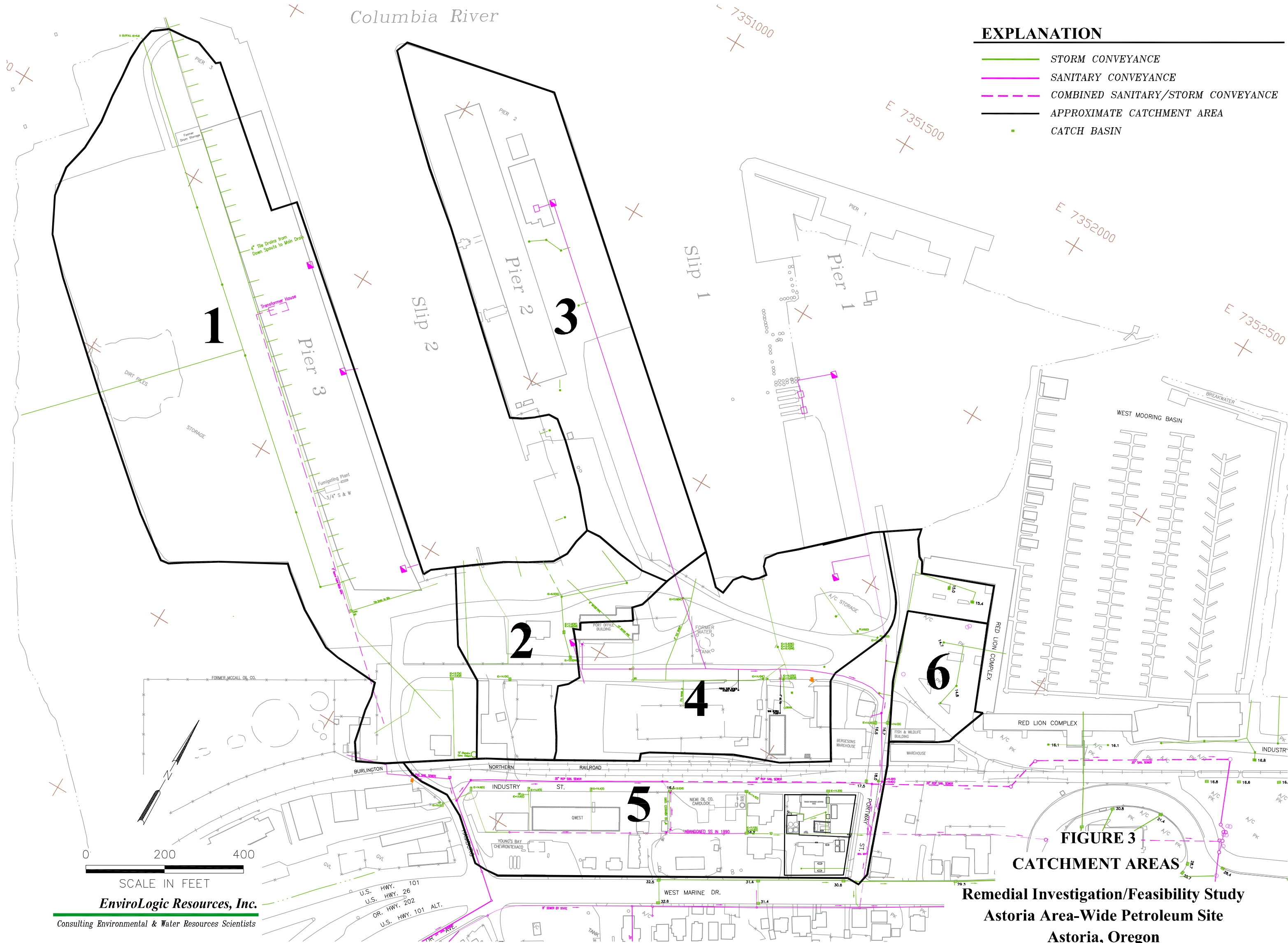


FIGURE 3
CATCHMENT AREAS
 Remedial Investigation/Feasibility Study
 Astoria Area-Wide Petroleum Site
 Astoria, Oregon

APPENDIX A

GEOPOTENTIAL INC., REPORT

SUMMARY REPORT

SUBSURFACE MAPPING SURVEY

*ASTORIA AREA-WIDE PETROLEUM SITE
ASTORIA, OREGON*

CLIENT:

*EnviroLogic Resources, Inc.
8948 SW Barbur Boulevard
Portland, Oregon 97219-4047*

October 1, 2002

GeoPotential Project Number 4154

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FIGURES

- 1. INDEX MAP**
- 2. SANITARY SEWER & STORM DRAIN MAP**
- 3. STORM DRAIN DRAINAGE ZONES MAP**

APPENDICES

APPENDIX A – GROUND PENETRATING RADAR SURVEYS --- PAGE 7

SUMMARY

A geophysical survey was conducted over portions of the Astoria Area Wide Petroleum Site in Astoria, Oregon (FIGURE 1.) to accomplish the following four tasks:

1. Map the location of Underground Storage Tanks, utilities, and distribution of fill materials.
2. Map the location of the sanitary & storm sewer systems.
3. Map the location of approximately 1.5 miles of petroleum product lines.
4. Perform a Bore Hole Clearance Survey (BHCS) over proposed borehole locations.

This report covers Task 2. Tasks 1, 3 and 4 were completed and reviewed in a report dated September 19, 2002.

Locations of surface features related to the sewer systems; catch basins, manholes cleanouts and outflows were observed and compared to existing maps of the systems. Ground Penetrating Radar (GPR) Surveys were conducted to verify the locations of sewer pipes shown in the maps and to map parts of the sanitary and storm sewer systems that were not included in the existing maps.

INTRODUCTION

Subsurface mapping surveys are geophysical surveys utilizing geophysical data and methods to detect and locate natural and manmade subsurface features. The Mala RAMAC Ground Penetrating RADAR System used throughout this survey is a geophysical tool designed to locate both metallic and non-metallic utilities as well as other features like Underground Storage Tanks (UST's).

TIMING

Ralph Soule, Nikos Tzetos and Tim Gutschow of GeoPotential conducted fieldwork on September 12 & 13, 2002. Tom Calabrese and Lynn Green representing EnviroLogic Resources coordinated the fieldwork. The report was written by Ralph Soule, and then mailed to EnviroLogic Resources on October 1, 2002.

SURVEY OBJECTIVES

The survey objectives at this Site are specified by Task 2 above. Tasks 1, 3 & 4 were completed at a previous date.

The sewer systems may provide throughways for contaminants to move, therefore mapping them in detail can provide a tool for predicting where contamination has or will spread.

SURVEY SITE

FIGURE 1. – INDEX MAP shows the various parcels of the Astoria Area-Wide Petroleum Site that were included in the SUBSURFACE MAPPING SURVEY. The sewer system mapping involved locating all the surface features related to the sewer systems in all the aforementioned parcels, as well as performing GPR Surveys to locate piping between these features. These features were found in the streets, between buildings and on the piers. Site conditions varied for the various Parcels.

SURVEY EQUIPMENT

The following geophysical instruments were used to conduct the survey:

- MALA RAMAC GROUND PENETRATING RADAR SYSTEM with a 500 MHZ ANTENNA (GPR Survey)
- HEATH SURE LOCK PIPE & CABLE LOCATOR (C&P Survey)

This equipment and the procedures used to meet the survey objectives of this part of the project have been proven effective in detecting buried objects such as utilities, USTs and buried waste drums (BWDs). Appendix A describes GPR Surveys.

PROCEDURES

Surface features related to the sewer systems; catch basins, manholes, cleanouts and outflows, were located and investigated. Each catch basin and manhole was opened, if possible, and the inflow and outflow pipes were marked on the surface. The sanitary sewer system was initially investigated by locating outflows from buildings and pump stations. This, in combination with the existing sewer system maps gave a preliminary idea on how accurate these maps were. It also identified areas that needed further investigation with GPR.

Next, GPR Surveys were performed to verify the location of sewer pipes in the vicinity of surface sewer features, and to confirm the accuracy of the existing maps. The maps were then updated with the new information.

C&P Surveys were performed to trace the pipes connected to metal outflows in the area between Piers 2 and 3, and the area west of Pier 3.

The resulting SANITARY SEWER & STORM DRAIN MAP (FIGURE 2.) was interpreted to determine the various STORM DRAIN DRAINAGE ZONES MAP (FIGURE 3.). This map shows the DRAINAGE ZONES that discharge to similar geographic locations.

RESULTS

The RESULTS are shown on FIGURES 2 & 3. Sanitary and storm drains were marked on the SITE with green marking paint.

PIER 3

The storm drain sewer system on the Pier consists of a series of catch basins aligned along the pier leading to a concrete outflow on the north of the pier. The southernmost catch basin is connected to a pipe coming from the west, but no GPR surveys were performed to map it, because of the ongoing construction in the area. A manhole near the catch basin system in the middle of the pier appears to be connected to a concrete outflow on the west of the pier.

The C&P Survey on the metal outflow located on the West of Pier 3 could not trace it more than a few feet into the bank. It is interpreted to be part of the dredging system used during the construction of the Pier and not part of the sewer system.

PIER 2

The storm drain system on pier 2 consists mainly of individual catch basins with outflows to the water. In addition to these, there is a pipe that connects the catch basins to the west and north of the Port building with one to the south of the main building on the pier, but its whereabouts are uncertain beyond that point.

The sanitary sewer system is pump driven, with two such pumps on the pier and a plastic pipe connecting the pier with the system along Portway Street.

PORT BUILDINGS AND PORTWAY STREET

The storm drain system around the port buildings connects catch basins on the south side of Portway Street with ones on the north, and then possibly with outflows to the water. The catch Basins between the Port Offices and the Port Shop are connected to one on Pier 2 as mentioned before. A small catch basin between the two piers is connected to the outflow to the north of it. The other sewer outflow to the west of the dock was traced with a C&P Survey and is heading towards the Port Garage building, its whereabouts are unknown though, since it is older than the building. Catch basins on the northeast of Portway Street are leading to outflows to the water. The two storm drain systems located to the northwest of the State Police buildings are draining to the north but their southernmost catch basins have been paved over.

The sanitary system out of the Port Office building is pump-forced to the south and along the middle of Portway Street towards the east. The sanitary sewer system out of the Police building is also pump-forced into the main pipe in the middle of Portway Street.

INDUSTRY STREET AND EAST OF PORTWAY STREET

A series of sewer pipes connects the catch basins around Industry Street and the buildings to the south, with a main storm drain pipe along the street. This pipe drains into a main pipe to the east of Industry Street along Portway Street that connects the city system to the south with outflows to the water. Other catch basins along this street drain into a separate main pipe that drains through an outflow to the north.

The sanitary pipe from Portway Street turns south and into a main pump station that forces sewage south into the city system.

STORM DRAIN DRAINAGE ZONES (FIGURE 3.)

ZONE 1

The catch basins on this pier all drain to the northwest or southwest as shown.

ZONE 2

All of the catch basins drain to the northwest or southwest of the central pier as shown. Several strip drains and catch basins along the current processing plant (not shown on FIGURE 3.) also drain to the southwest of the pier.

ZONE 3

The catch basins on the pier in ZONE 3 all drain to the northeast. The catch basins on shore appear to drain to the northwest but they were difficult to map due to large fill material causing “noise” in the GPR data. Outfalls for these catch basins could not be located. However it appears that some of the fill material post dates the catch basins and may have covered their outfalls. If that is the case then these drains may empty into the coarse fill material.

ZONE 4

Some of the catch basins in this ZONE drain into the sanitary sewer line along Industry Street where they discharge along with the sanitary sewer to the northeast. The remainder of the catch basins drain to two discharge pipes adjacent to the Red Lion Complex.

LIMITATIONS

Geophysical surveys consist of interpreting geophysical responses from subsurface features. Since a variety of subsurface features can produce identical geophysical responses, it is necessary to confirm the geophysical interpretation with intrusive investigations such as excavating or drilling. In addition, many subsurface features may produce no geophysical response. The use of this SUBSURFACE MAPPING SURVEY is the sole responsibility of the CLIENT.

Ralph Soule
GeoPotential

September 25, 2002



Nikos Tzetos
GeoPotential

APPENDIX A GROUND PENETRATING RADAR SURVEYS

Ground Penetrating Radar (GPR) uses high frequency radio waves directed into the ground to acquire information about the subsurface. The energy radiated into the ground is reflected back to the antenna by features having significantly different electrical properties to that of the surrounding material. The greater the contrast, the stronger the reflection. Typical reflectors include water table, bedrock, bedding, fractures, voids, contaminant plumes and man-made objects such as UST's and utilities. Data are digitally recorded or downloaded to a laptop computer for filtering and processing.

GPR can be a valuable tool to accurately locate both metallic and non-metallic UST's and utilities; buried drums and hazardous material even below reinforced concrete floors and slabs. GPR can delineate trenches and excavations and, under some conditions, it can be used to locate contaminant plumes. It has been used as an archaeological tool to look for buried artifacts. It can accurately profile fresh water lake bottoms either from a boat or from a frozen lake surface. GPR can locate voids below roads and runways. GPR has numerous engineering applications. It can be used in non-destructive testing of engineering material, for example, locating rebar in concrete structures and determining the thickness of concrete and other structural material.

GPR is often used in conjunction with magnetometer surveys. Magnetometer Surveys are very fast and large areas can be covered cost effectively. Often, magnetic anomalies can be marked in the field, then can be further investigated using ground penetrating radar.

Under some conditions, although a UST itself may not be clearly visible in a GPR record, the excavation or trench in which the UST is buried is evident. When combined with other complimentary data, such as magnetometer data, it is safe to assume that a GPR "trench" with no clear GPR UST reflection, combined with a large "tank-shaped" magnetic anomaly indicates the presence of a UST.

ADVANTAGES

GPR provides continuous records along traverses which, depending on the goal of the survey, may be interpreted in the field.

In clean, dry, sandy soil, reflections from targets as deep as 100 feet are possible.

At flat, open sites, for reconnaissance purposes, the antenna can be towed behind a vehicle at several mph.

Many GPR antennas are shielded and are unaffected by surface and overhead objects and power lines.

The resolution of data is very high particularly for high frequency antennas.

GPR can be used in conjunction with magnetic or EM surveys to accurately locate buried objects.

Even under adverse site conditions, shallow, man-made objects generally can be detected.

Fiberglass UST's can be detected using GPR.

LIMITATIONS

Subsurface objects can be detected but, in general, they cannot be identified. USTs and utilities have a characteristic reflection, however, large rocks and boulders have a similar reflection.

The reflection visible in a GPR record is very complex and may be caused by small changes in the electrical properties of the soil. The target in mind may not produce it.

Other methods may be necessary to aid in the interpretation of the data (use a magnetometer to detect a large metallic mass, then GPR to determine if the object is tank-like, or a utility locator to determine if there are feed lines and fill pipes leading to the object).

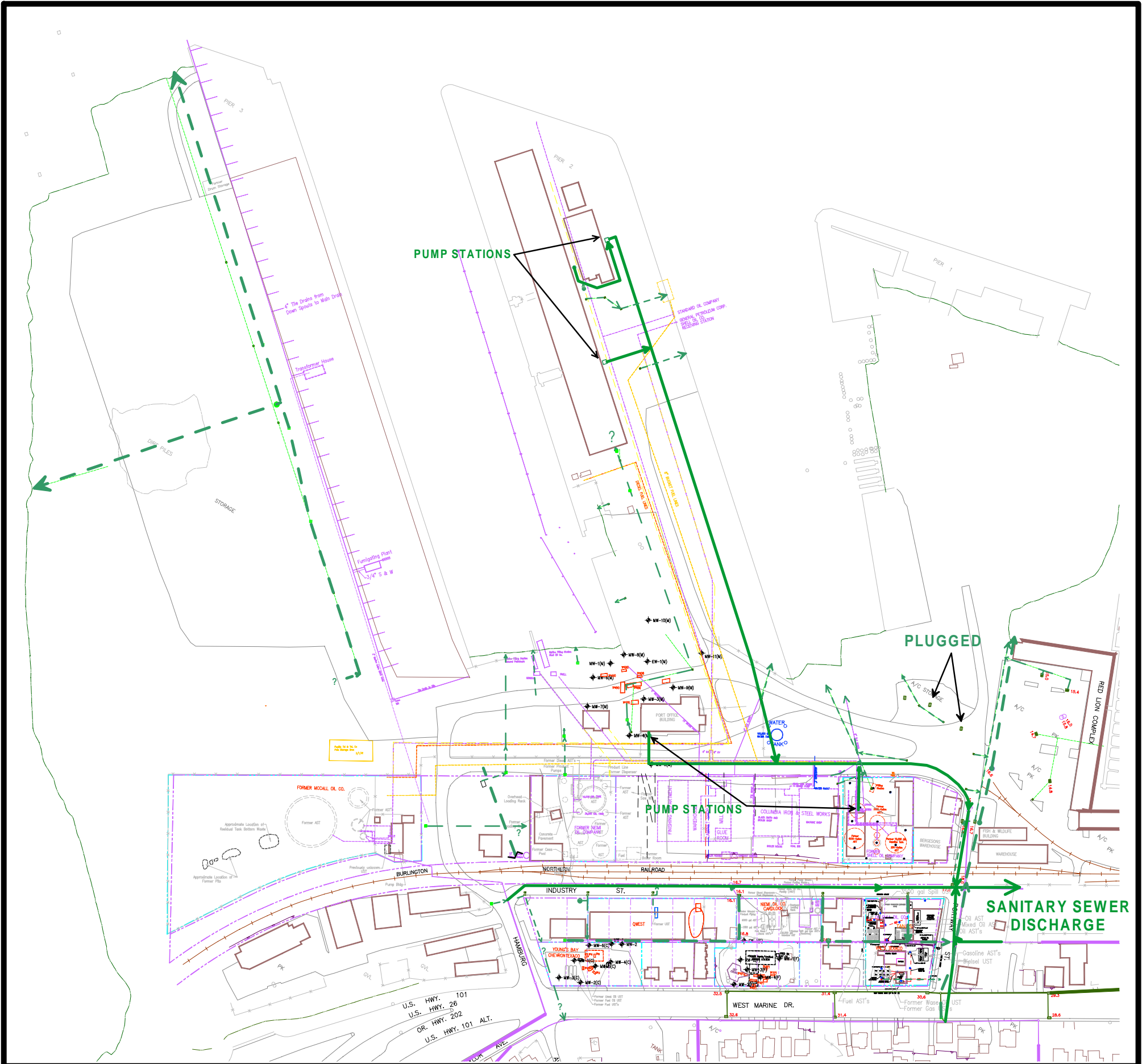
Penetration of the GPR signal is "site specific" and its depth of penetration at a particular site cannot be predicted ahead of time. Near surface conductive material, such as salty or contaminated ground water and wet, clay-rich soil, may attenuate the radar signal, limiting the effective depth of the survey to several feet.

Adequate contrast between the ground and the target is required to obtain reflections. UST's may be missed if they are badly corroded.

To determine the depth to an object without "ground truth", assumptions must be made regarding soil properties.

GPR may not be cost-effective for some projects. For a detailed survey mapping underground storage tanks and utilities, it may be necessary to collect data in orthogonal directions at 5-foot line spacing.

To acquire the highest quality data, proper coupling between the antenna and the ground surface is necessary. Poor data may be obtained at sites covered with tall grass and brush.



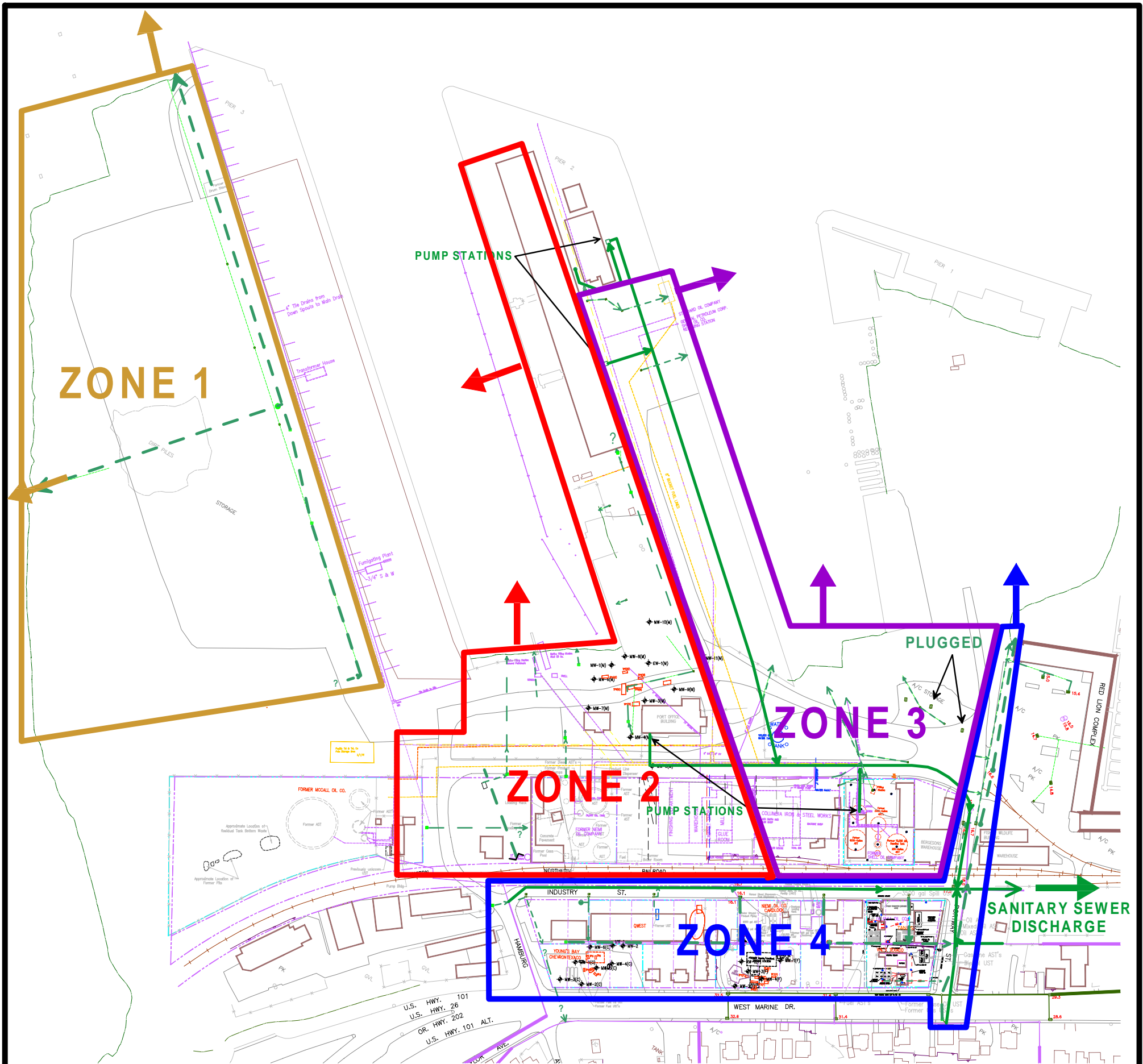
LEGEND

← - - - - STORM DRAINS

← - - - - SANITARY/COMBINED SEWER

Approximate Scale
900 feet

	ENVIRONMENTAL & EXPLORATION GEOPHYSICS 437 N.E. LIBERTY AVE. GRESHAM, OR 97030 • PH (503) 665-7520 • FAX (503) 492-4404 E-MAIL GeoPotential@aol.com	LOCATION: Astoria Area-Wide Petroleum Site Astoria Oregon	Figure 2. SANITARY SEWER & STORM DRAIN MAP
DATE: August 29, 2002	SUBSURFACE MAPPING SURVEY	PROJECT No. 4154	CLIENT: Envirogic Resources, Inc.



LEGEND

STORM DRAINS
SANITARY/COMBINED SEWER
STORM DRAIN DRAINAGE ZONES

ZONE 4

Approximate Scale

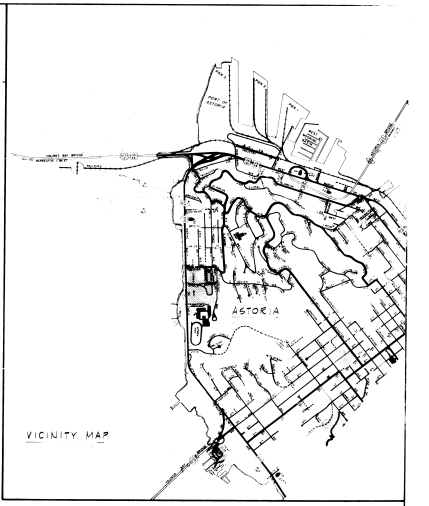
900 feet

APPENDIX B

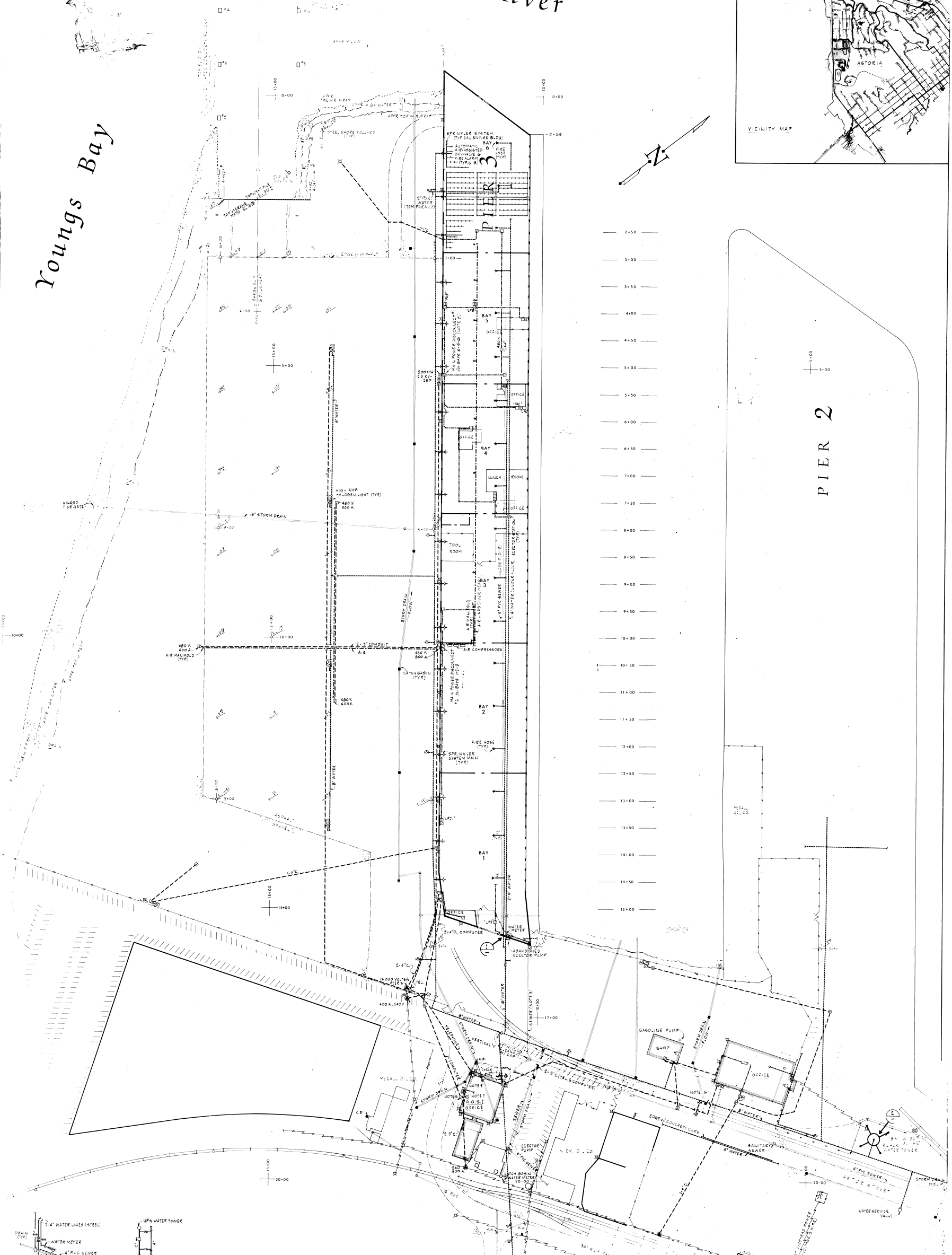
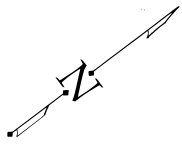
STORM WATER FEATURES SOUTH OF SLIP 2, 1986

Columbia River

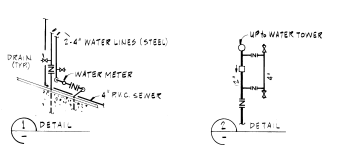
Youngs Bay



VICINITY MAP



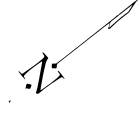
PIER 2



LEGEND

⊕	FIRE HYDRANT	■	FIRE VALVE
⊕	1\"/>	⊕	SEWER ELECTRIC PUMP
⊕	ELECTRIC METER	⊕	GATE VALVE
⊕	CAT. MAIN	⊕	HORIZONTAL CONNECTION
⊕	WATER METER	⊕	STAIR
⊕	4\"/>	⊕	CONCRETE WELL
⊕	4\"/>	⊕	CONCRETE WELL

NOTES:
1. REFER TO DRAWING NO. [unreadable] FOR DETAILS.
2. REFER TO DRAWING NO. [unreadable] FOR DETAILS.
3. REFER TO DRAWING NO. [unreadable] FOR DETAILS.
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8. REFER TO DRAWING NO. [unreadable] FOR DETAILS.
9. REFER TO DRAWING NO. [unreadable] FOR DETAILS.
10. REFER TO DRAWING NO. [unreadable] FOR DETAILS.



DATE: [unreadable] BY: [unreadable] CHECKED: [unreadable]

APPENDIX C

STORM WATER POLLUTION CONTROL PLAN, JUNE 2002

STORM WATER POLLUTION CONTROL PLAN

Prepared For:

**PORT OF ASTORIA
MARINE SERVICE CENTER**

**1 PORTWAY
CLATSOP COUNTY
ASTORIA, OREGON 97103**

**NPDES 1200-Z
PERMIT FILE #107184/A**

JUNE 2002

Prepared By:

TRT Engineering, Inc.
2636 S.E. Market Street
Portland, Oregon 97214
(503) 235-7592

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APPENDICES

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1.0 INTRODUCTION

The Storm Water Pollution Control Plan (SWPCP) which follows was developed by TRT Engineering, Inc. (TRT), for Port of Astoria Marine Service Center (Marine Center) located in Astoria, Oregon. This plan was developed pursuant to the requirements of the Federal Clean Water Act (40 CFR Part 122.26), National Pollutant Discharge Elimination System, (NPDES) General Permit Number 1200-Z. The material contained in this plan is the sole possession of the Port of Astoria and TRT Engineering, Inc., and is to be reproduced only with their written permission.

2.0 CERTIFICATION

2.1 Management Approval

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

Name: William (Bill) Lord

Title: Deputy Director

Signature: William W. Lord

3.0 SITE DESCRIPTION

3.1 Industrial Activities

The facilities covered by this plan belong to Standard Industrial Classification (SIC) Groups 4449, Water Transportation of Freight, NEC.

3.2 Location

Latitude	46° / 11' / 14" N Deg./ Min./ Sec.
Longitude	123° / 51' / 34" W Deg./ Min./ Sec.
Address	Port of Astoria Marine Service Center 1 Portway Astoria, OR 97103

See the General Location Map (Appendix A) for the location of the Marine Service Center's site in relation to major transportation routes, surface waters, and other relevant features.

3.3 Site Description

The approximately 70-acre site is located at 1 Portway, in Astoria, Oregon. The site is bordered on the north by the Columbia River and on the west by Young's Bay and the south by industrial uses, the Burlington Northern Rail Road, and Highway 30, on the east by the West Basin. The site includes an office, maintenance shop, three piers, and buildings. The majority of the site is used for marine activity. Paved parking lots, operation areas, and buildings cover approximately 100 percent of the property. The maintenance building was constructed with metal roofing and siding. The office building has wood siding and composite shingle roofing. Buildings on Pier 2 have metal siding and roofs. No buildings on Pier 1 and Pier 3 exist.

The site is owned by the Port of Astoria which leases land to private businesses.

The site topography generally slopes towards the Columbia River. There are approximately 37 catch basins and 10 outfalls to the Columbia River. Two of the outfalls are to city of Astoria storm sewer drains. There is combined flow from Port property and adjacent public street storm drains through these outfalls.

3.4 Impervious Area

For the purpose of this plan, impervious areas include those surfaces with a runoff coefficient of 0.70 or greater. Based on this interpretation, the total amount of impervious area for the site at the time this plan was developed was approximately 100 percent of the site was developed with buildings, paved parking lot, paved docks, and loading areas.

3.5 Significant Materials

The following is a list of all significant materials, which could potentially be present in the storm water discharge and is based on information gathered during the site evaluation on April 19, 2002. The list also indicates the location where each of the significant materials is found. Each significant material has then been described, located and container sizes indicated. Locations correlate to the buildings indicated on the site plan found in Appendix A. Other sources of potential pollutants are also listed.

Material	Storage Location	Approximate Quantity & Container Size/Type
Lubricants	Maintenance Shop	2-55 gal. drums (with containment)

3.6 Receiving Waters

Storm water runoff from the site discharges to the Columbia River through 10 piped outfalls along the northern site boundary. The receiving waters are periodically under tidal influence from the nearby Pacific Ocean and are subject to co-mingling of fresh-water river and salt-water ocean flows.

3.7 Storm Water Outfalls

There are ten off-site discharge points located along the north, east, and south site perimeter (see Site Plan drawing Appendix A). Several outfalls extend through the pier bulkheads below the paved dock decking. These outfalls are not readily accessible for visual inspection and sampling. Because Outfall 1 and 6 are accessible and were found to be representative site runoff they were chosen as sampling points.

4.0 CONTROL MEASURES

4.1 Storm Water Management

4.1.1 Existing Control Measures

Good housekeeping practices:

- Catch basins periodically cleaned

Structural control measures

- Oil-trapping catch basin inlets

4.2 Spill Prevention and Response Procedures

4.2.1 Petroleum Products

The control and prevention of spills of petroleum products will be handled by the Spill Prevention, Control and Countermeasure Plan (SPCC) contained in Appendix B.

4.2.2 Chemicals or Other Hazardous Materials

Section 1.5 lists chemical and other potential pollutants and their storage location on site. Section 2.1.1 and 2.1.2 discusses control measures for storage and containment of these materials to prevent contact with precipitation or entry into the storm drainage system. In the event of a spill, the same procedures for emergency response and notification outlined in the SPCC plan will be followed. These procedures will be posted in all storage areas along with the following phone numbers:

Cowlitz Clean Sweep
Astoria, Oregon
(503) 338-0173

Spencer Environmental Services, Inc.
Portland, Oregon
(503) 788-4612

Foss Environmental, Inc.
Portland, Oregon
(503) 290-1655

4.3 Chemicals or Other Hazardous Materials Spills

Clatsop County Emergency Services
911

Coast Guard Marine Safety Office
(800) 424-8802

Oregon Emergency Management Division
(800) 452-0311

National Response Center
(800) 424-8802

Chemical Transportation Emergency Center (CHEMTREC)
(800) 424-9300

5.0 PREVENTIVE MAINTENANCE

A preventive maintenance program will be implemented to insure the effective operation of materials management practices, structural and non-structural control measures, and any treatment facilities used to comply with the requirements of this permit. The preventive maintenance program will consist of the following:

5.1 Site Inspection Procedures

Inspections of areas where potential spills of significant materials could impact storm water runoff, control structures, and any treatment facilities will be made on a monthly basis, during the rainfall season, in conjunction with the visual observation of storm water outfall points. These inspections will be documented on the forms provided in Appendix C.

5.2 Maintenance Procedures

A regular program of cleaning and repairing storm water control structures, treatment facilities, and materials handling and storage facilities will be conducted throughout the year. All maintenance work completed will be documented on the forms provided in Appendix C.

6.0 EMPLOYEE EDUCATION

The employee awareness program is designed to inform site employees who may be involved in activities at this facility, as well as any contractor (and his employees on-site) operating at the site of the components and goals of the SWPCP, and address spill response procedures, good housekeeping and materials management practices.

6.1 New Employee Orientation

All new employees will be given an overview of the goals and objectives of the SWPC Plan, spill response procedures, and housekeeping practices, as well as training in materials handling practices specifically related to their job as part of the overall company orientation program.

6.2 Annual Review

During the summer or fall of 2003 all existing employees involved with this site will be given an overview of the goals and objectives of the SWPC Plan, spill response procedures and housekeeping practices as part each tenant's regular safety and training program. Specific training in materials handling practices, the operation of storm water pollution control structures, and procedures for taking storm water samples and observations will be given to the employee(s) responsible for these functions. This training will be reviewed on an annual basis or whenever necessitated by modifications to the SWPC Plan.

7.0 STORM WATER MONITORING PROGRAM

7.1 Monitoring Sites

Stormwater runoff shall be monitored at two locations at Outfall No. 1 (at end of Pier 3) and Outfall No. 6 (northeast of the Port office at the head end of Slip 1). These sample locations were chosen because they are representative of the runoff discharges from street, parking lot, and maintenance areas (see Site Plan drawing – Appendix A). These sampling points will serve to determine the contribution of possible contaminants by runoff from the subject property.

7.2 Sampling Procedures/Quality Assurance

The principle of sampling is to collect a representative sample of a medium and analyze it before significant alteration of the sample occurs. This requires a sampling methodology which assures

proper sampling techniques, handling and storage to eliminate, or minimize to the greatest extent possible, introduced fluids, dilutions, chemical reactions and cross-contamination. The sampling and analysis plan may include sample redundancy (duplicates), and field and laboratory blanks to evaluate sampling and decontamination procedures and reproducibility of laboratory analysis. It also requires careful and prompt analysis of samples and blanks by a qualified laboratory. Collectively, these procedures and protocols constitute a quality assurance/quality control (QA/QC) policy. The sampling method will be uniform for all sites and from one sampling episode to the next. The sampler will first record the volume of discharge or water depth from the flow measurement device (if applicable). The sampler then takes any other field measurements (e.g., temperature, conductivity and pH) that may be required.

Immediately upon collection, samples will be properly stored on ice or suitable synthetic substitute ("blue ice") until delivered to the laboratory. Proper cleaning and decontamination of all equipment and instruments will be observed in order to minimize the potential for cross-contamination and to assure the integrity of current and future samples. Cleaning procedures are given later in this document.

7.3 Sample Containers

Sample containers will be obtained from the laboratory that analyzes the sample. The laboratory will provide the appropriate containers, with added preservatives if necessary. The laboratory will be instructed with regard to the media to be tested, the number of samples from each sampling site, and the parameters to be analyzed.

7.3.1 Decontamination and Cleaning

All equipment, instruments, tools or any other object that is placed into the sampling area of a surface water site must be cleaned thoroughly between each site. Two methods are acceptable; high pressure/hot water wash (steam cleaning) and a soap solution washes with distilled water rinses. In cases where sampling for trace concentrations of solvents is conducted, a methanol or other suitable solvent rinse may be included in the washing procedure.

Decontamination of all equipment includes every surface, external and internal, which can come in contact with the water sample. Using the high-pressure hot water cleaning method is straightforward. The wash water must be clean and complete rinsing is required if soaps or detergents are used. All soaps or detergents must be mild and compatible with the parameters to be tested. Rinsing with distilled water is required.

The use of a mild detergent solution in distilled water with several distilled water rinses is a widely recognized, low expense method to decontaminate smaller pieces of equipment and testing instruments. Mechanical brushing of the solution on each surface is required with a bottlebrush or other suitable washing instrument. Following washing, the surfaces must be triple rinsed with copious quantities of distilled water with the final two rinses free flowing (not dipped in a container of distilled water but distilled water poured over the surface).

7.3.2 Sample Collection

Surface samples should be taken at least 4 inches below the surface of the water if possible. If the water is less than 8 inches deep or the container is of a size or shape that 4 inches of submersion is not possible the water should be collected as far beneath the surface as possible without incorporating bottom sediments. Occasionally samples may need to be collected at some specified depth below the water surface. These samples must be collected with a special sample collection device.

As much as possible, floating and suspended material in the water should be avoided. In addition, muddying the sample or stirring other bottom material up into the sample is to be avoided. In some small streams, ditches or outfall pipes it may be necessary to collect water as it trickles into the sample bottle. The rule is to minimize agitation of suspended solids, sediments, and surface debris; and to the greatest extent possible, avoid aeration and agitation of the collected water.

7.3.3 Handling, Storing, Shipping, and Testing

The samples, immediately upon collection, should be taken out of direct sunlight, carefully put in a cool place, and as quickly as possible transported to an iced cooler for storage. Sampling runs should be made in several legs or stops in order to allow the transport of samples to the cooler. The ice in the cooler should not be allowed to entirely melt before more ice is added and the melt water should not be allowed to overtop the sample containers. As soon after collection as possible, the samples should be transported to the lab.

A chain-of-custody and sample analysis form must always be used and the sample containers marked with date and time, sampler, location of sample site, and a designation (bottle number or field ID number). Generally, the sample should arrive at the lab the same day as taken and certainly, no more than 24 hours should elapse. If there is any question about time allowed between sampling and analysis a call to the lab will generally get the sampler the guidance required. Shipping samples should be avoided as the chain-of-custody can be broken and samples are in danger of mishandling. When shipping cannot be avoided, sealed and locked containers should be used.

Note: The chain-of-custody form must be filled out as to sampler, date and time of sampling, sample location or station, sample designation (bottle number etc.), analysis to be done, type of sample, to whom the sample was delivered, and when. The sample bottles must also identify the sampler, the sample designation (bottle number, etc.), date and time of sampling, source of sample (site number or name), and its location. Notes should also be taken of all pertinent information of the sampling procedure: sampling techniques, bottle numbers, locations, times, dates, weather, unusual or noticed conditions (smells, sites, sounds, colors etc.), and parameters such as temperature, conductivity and pH which are sampled in the field. See EPA SW-846.

7.3.4 Laboratories

The laboratory, which is used, must be certified (EPA, and/or DEQ-approved) and must analyze the samples in a timely manner. The laboratory must have an internal quality assurance/quality

control (QA/QC) program that will be presented with the sample results. The laboratory must also be capable of conducting any testing according to EPA SW-846 and the Standard Methods manuals.

7.3.5 Blanks and Splits

It is important to run split samples and blanks to verify the lab's accuracy and the "background" values of the sampling procedure, the cleaning procedure and the laboratory's procedures. This is particularly true with trace constituents, volatile and traces pesticides/organic analysis. At least one equipment blank should be submitted with each set of samples.

7.4 Parameters

7.4.1 Primary Parameters

Following are the primary monitoring parameters and frequencies.

GRAB SAMPLES OF STORM WATER	
Parameter*	Frequency
pH	Twice per year
Total Copper	Twice per year
Total Lead	Twice per year
Total Zinc	Twice per year
Total Suspended Solids	Twice per year
Total Oil and Grease	Twice per year
* Parameters must be analyzed on samples collected from the same storm event.	

ON-SITE AND VISUAL MONITORING OF STORM WATER	
Parameter	Frequency
Floating Solids:	Once a Month
Oil and Grease Sheen (visual)**	Once a Month (when discharging)
**Whenever visible oil sheen is detected in a storm water discharge during a required monthly visual observation, it shall be sampled for Oil & Grease.	

Following are the storm water discharge analytical benchmarks.

Parameter	Benchmark
pH	5.5-9.0 S.U
Total Copper	0.1 mg/l
Total Lead	0.4 mg/l
Total Zinc	0.6 mg/l
Total Suspended Solids	130 mg/ l
Total Oil & Grease	10 mg/
E. Coli **	406 counts/100ml
Floating Solids (associated with industrial activities)	No Visible Discharge
Oil and Grease Sheen	No Visible Sheen

7.4.2 Other Parameters

7.4.2.1 NPDES/WPCF Permitted Materials

Not Applicable

7.4.2.2 Water Quality Limited Receiving Stream - TMDL

Not Applicable

7.5 Sampling Frequency

7.5.1 Visual Observations

According to the NPDES General Permit provisions, "visual observations shall be made monthly, during those months when at least one storm event produces runoff". Visual observations should be made during the first 30 minutes of a storm event. All visual observations shall be documented on the appropriate forms (see Appendix C) and maintained for a minimum period of five years. In addition to required visual data, the observer should record the date, time, rainfall amount (if known), and other pertinent information, and initial the report. If an oil sheen, floating solids, or wood debris are observed at the monitor point, an investigation should be made of all outfalls and offsite contribution in order to determine the source of the problem and then correct it. In addition, samples of the oil sheen must be collected for oil and grease analysis.

7.5.2 Laboratory Analysis

Field sampling and analysis for the above mentioned parameter should be conducted twice a year. The sampling events shall be at least 60 day apart. All sampling points shall be sampled during the same storm event.

8.0 RECORD KEEPING

8.1 Forms

All inspections of storm water control structures and equipment; visual observations of storm water outfall discharge; sample collection and lab results; incidents of spills or leaks of significant materials which could impact storm water runoff, including corrective actions, surface water discharge (if any); and other relevant information will be fully documented using the forms provided in Appendix C. Record forms must be filled out completely and include the following information where appropriate:

- The date, exact place, time and methods of sampling, measurements or observations;
- The individual(s) who performed the sampling, measurements or observations;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques and methods used; and
- The results of such analyses.

Maintenance activities such as cleaning and repairing storm water control and any treatment facilities should also be documented on the appropriate forms along with a description of the specific action taken.

8.2 Record Retention

All report forms and other records related to storm water management under this plan and NPDES General Permit No. 1200-Z will be retained for a minimum period of five years. This period may be extended by a request of the Department of Environmental Quality at any time.

8.3 Reporting

8.3.1 Monitoring Data

According to the conditions of NPDES General Permit 1200-Z, the permittee is required to tabulate monitoring data for this facility and submit it to the Department of Environmental Quality, Northwest Regional Office, by July 15 of each year.

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

8.3.2 Permit Noncompliance

Any noncompliance with Permit 1200-Z, which may endanger health or the environment, must be reported to the Department of Environmental Quality. An oral report shall be given by telephone within 24 hours from the time of first knowledge of the incident. A written report shall follow the oral report within five working days, and shall contain:

- A description of the noncompliance and its cause;
- The period of noncompliance, including exact dates and times;
- The estimated time noncompliance is expected to continue if it has not been corrected; and
- Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following shall be included as information that must be reported within 24 hours:

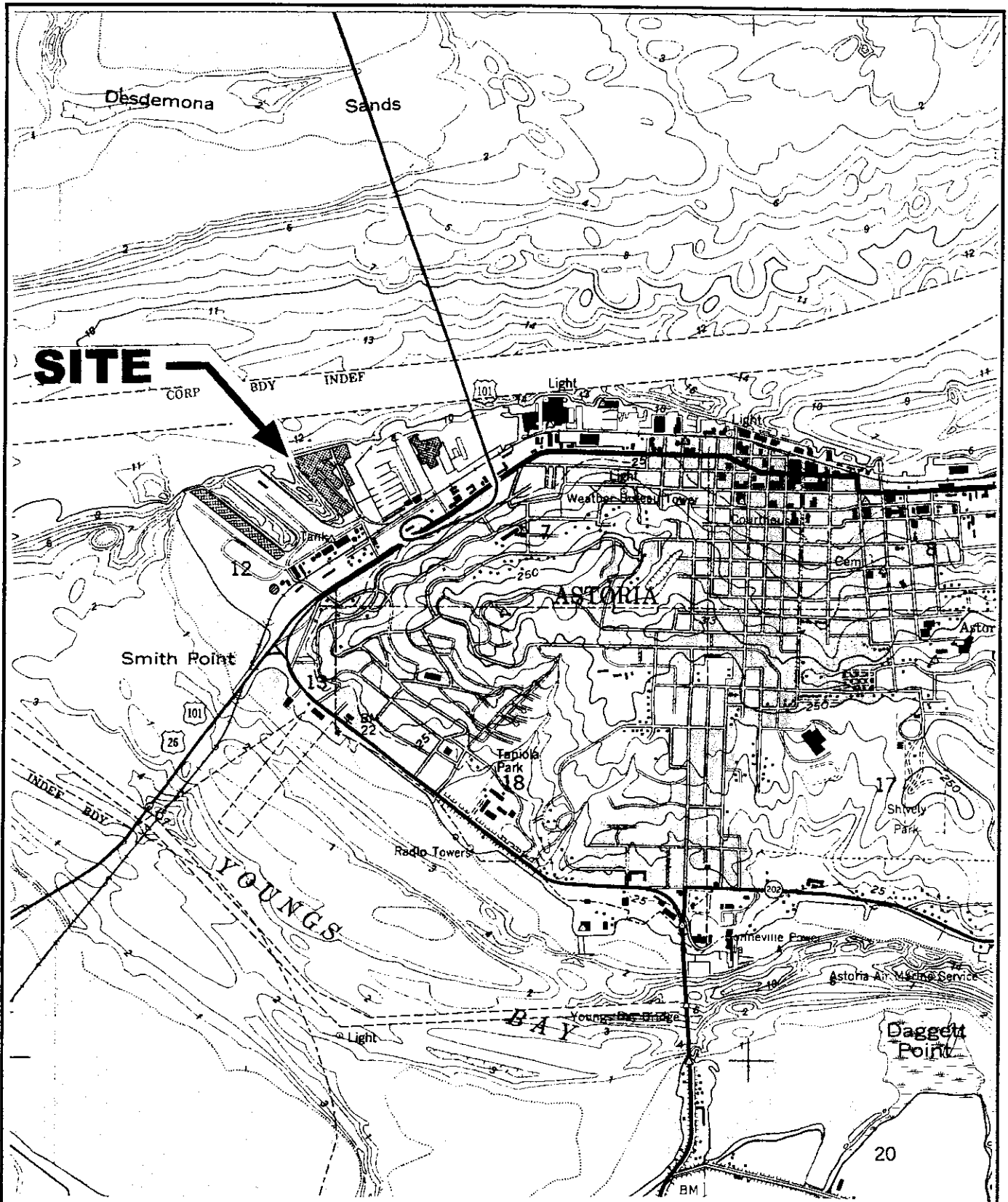
- Any unanticipated bypass, which exceeds any effluent limitation in the permit;
- Any upset which exceeds any effluent limitation in the permit.
- Note: The Department of Environmental Quality may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

9.0 PLAN REVIEW

A full plan review will be conducted annually, prior to the onset of the rainfall season. The plan review will include a complete site inspection of all areas where potential spills of significant materials can impact storm water runoff. The plan should be amended if more effective and field proven control technology is available that will significantly reduce the likelihood of pollution from storm water discharge to receiving waters. The SWPCP shall be amended within six months of a change in the facility design, construction, operation or maintenance that materially affects the storm water runoff from the site.

APPENDIX A

GENERAL LOCATION MAP AND SITE PLAN



FROM ASTORIA, OREGON-WASHINGTON QUADRANGLE 7.5 MINUTE SERIES

SCALE: 1"=2000'

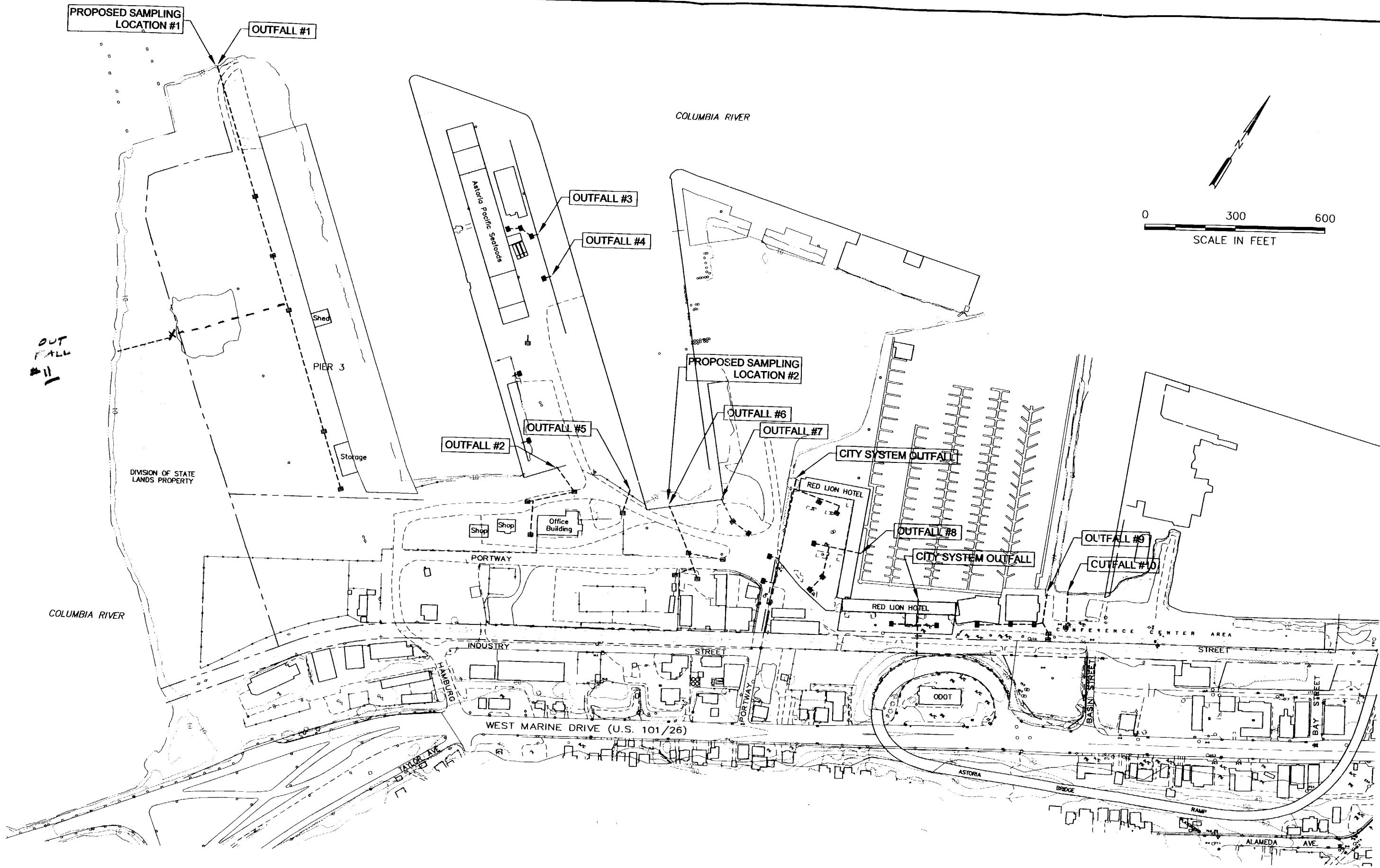
TRT ENGINEERING, INC.

2636 S.E. MARKET STREET
 PORTLAND, OREGON 97214
 (503) 235-7592

**PORT OF ASTORIA - MARINE SERVICE CENTER
 STORM WATER POLLUTION CONTROL PLAN
 GENERAL LOCATION MAP**

PROJECT NUMBER: POA01

FIGURE 1



OUTFALL #11

LEGEND
 ■ STORM DRAIN INLET
 --- STORM DRAIN PIPE

TRT ENGINEERING, INC.
 2838 S.E. MARKET STREET
 PORTLAND, OREGON 97214
 (503) 235-7592

PORT OF ASTORIA
 MARINE SERVICE CENTER
 ASTORIA, OREGON
 STORMWATER POLLUTION CONTROL PLAN
 SITE PLAN

DRAWING NO.
 2
 PROJECT NO.
 CS101

APPENDIX B

SPILL PREVENTION, CONTROL AND COUNTER MEASURE PLAN

**SPILL PREVENTION, CONTROL &
COUNTERMEASURE PLAN**

Prepared For:

**PORT OF ASTORIA
MARINE SERVICE CENTER**

**NO. 1 PORTWAY
CLATSOP COUNTY
ASTORIA, OREGON 97103**

JUNE 2002

Prepared By:

**TRT ENGINEERING, INC.
2636 S.E. Market Street
Portland, Oregon 97214
(503) 235-7592**

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1.0 CERTIFICATION INFORMATION

1.1 Facility Information

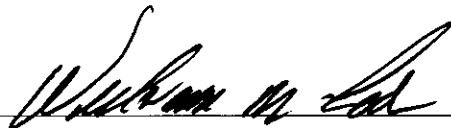
Facility Name	Port of Astoria Marine Service Center
Facility Address:	No. 1 Portway Astoria, OR 97103
Facility Type:	Water Transportation and Service
Name/Address of Owner:	Port of Astoria Marine Service Center No. 1 Portway, Suite 300 Astoria, OR 97103
Name/Address of Tenant:	Port of Astoria Marine Service Center No. 1 Portway, Suite 300 Astoria, OR 97103
Facility Spill Prevention Coordinator:	Bill Cook Port of Astoria Marine Service Center

1.2 Management Approval

I hereby certify that Port of Astoria Marine Service Center extends its full approval of this SPCC Plan and will commit all necessary resources to see that it is implemented.

Name:	Mr. Bill Cook
Title:	Deputy Director

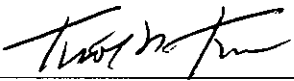
Signature: _____



1.3 Engineer Certification

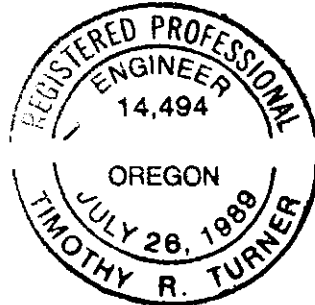
I hereby certify that I have examined the facility and, being familiar with the provisions of 40 CFR, Part 112 and 122, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Engineer: Timothy R. Turner, P.E.
Oregon Registration #14494
Project Manager
TRT Engineering, Inc.

Signature: 

Certification Date: 6/24/02

Engineering Seal:



exp 6/30/02

2.0 PURPOSE OF SPCC PLAN

The Spill Prevention Control and Countermeasure Plan (SPCC Plan) has been prepared pursuant to the Environmental Protection Agency (EPA) Code of Federal Regulations (CFR) 40. Part 112 and 122.

The discharge of petroleum and petroleum-based products into or upon public waters is specifically prohibited under federal and state laws to the extent that such discharge violates water quality standards, causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

Thus, the primary purpose of this SPCC Plan is to present guidelines, procedures, methods, and equipment for the prevention of a release of petroleum products to public waters. In the event of a release from the facility, the SPCC Plan provides initial response guidelines to minimize impact to the environment resulting from the release and the protection of public health and employee safety.

3.0 DESCRIPTION OF FACILITIES

The approximately 70-acre site is located at 1 Portway, in Astoria, Oregon. The site is bordered on the north and by the Columbia River and on the west by Young's Bay and the south by industrial uses, the Burlington Northern Rail Road, and Highway 30, on the east by the West Basin. The site includes an office, maintenance shop, three piers, and newly paved docks and buildings. The majority of the site is used for marine activity. Paved parking lots, operation areas, and buildings cover approximately 100 percent of the property. The maintenance building was constructed with metal roofing and siding. The office building has wood siding and composite shingle roofing. Buildings on Pier 2 have metal siding and roofs. No buildings on Pier 1 and Pier 3 exist.

The site is owned by the Port of Astoria which leases land to private businesses.

The site topography generally slopes towards the Columbia River. There are approximately 37 catch basins and 10 outfalls to the Columbia River. Two of the outfalls are to city of Astoria storm sewer drains. There is combined flow from Port property and adjacent public street storm drains through these outfalls.

4.0 EXISTING OIL STORAGE CONTAINER

4.1 General

EPA regulations define oil as oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. This plan makes reference to petroleum product, or substance and shall have the same meaning as oil.

4.2 Manufacturing Facility

The following is a list of all significant materials which could potentially be present in the storm

water discharge and is based on information gathered by TRT during the site evaluation on April 19, 2002. The list also indicates the location where each of the significant materials is found. Each significant material has then been described, located and container sizes indicated. Locations correlate to the buildings indicated on the site plan found in Appendix A. Other sources of potential pollutants are also listed.

Material	Storage Location	Approximate Quantity & Container Size/Type
Lubricants	Maintenance Shop	55-gal. drums (with containment)

Motor oil and hydraulic oil leaks from transport vehicles and forklifts are likely to occur in the paved areas of the loading area.

5.0 PAST SPILL EXPERIENCE

This facility has no history of any releases.

6.0 POTENTIAL EQUIPMENT FAILURE

This section discusses the various types of potential equipment failure and the probable location of receiving waters in immediate danger. Plant personnel should be aware of the location of nearby outfalls or conveyances that could result in a release to public waters.

Storage and filling from petroleum containers can lead to and spills due to their aboveground locations. Equipment operators must be careful while operating equipment near the storage containers, especially machinery equipped with lifting forks or buckets that could easily pierce the container walls. The following list presents potential failures and oversight that could result in a release:

- The wall of a container is pierced by heavy equipment.
- Fill tube is not closed and precipitation enters the tank causing overflow.
- Hydraulic line ruptures.
- Mobile equipment leakage.

Incidental drips and spills are usually of such small quantity that the release is easily contained in a small area and may not pose a risk to release in the storm sewer system. Major overflowing or equipment failure could lead to the release of large amounts of the substance and pose a significant contamination risk.

7.0 SPILL PREVENTION FACILITIES

7.1 General

This section describes the various spill prevention devices and methods used to control potential releases of product from the existing petroleum facilities.

7.2 Fuel Storage

In the event of a spill or release, loose absorbol ("ultrasorb") and absorbent pads ("PIG absorbent socks") are available to contain the movement of the substance to the smallest area possible. Ditches in immediate danger will have a temporary dike constructed of sand or other appropriate material to prevent the flow of the substance into the storm water conveyance system.

8.0 PERSONNEL TRAINING

All personnel associated with operations at Port of Astoria Marine Service Center have been or will be instructed and rehearsed in the following spill prevention and countermeasure procedures:

- After loading or unloading trucks employees shall look for oil drips or spills from front loader or truck.
- Clean oil drips or spills with absorbent.
- Employee instruction sessions will be held on oil spill prevention, containment and retrieval methods, and a "dry-run" drill for an on-site spill incident will be conducted.
- Instructions and phone numbers will be publicized and posted at the office and shops regarding the procedures for reporting spills to the appropriate parties.
- Instructions and company regulations will be conspicuously posted which relate to oil spill prevention and countermeasure procedures.

9.0 FUTURE SPILL PREVENTION PLANS

By Fall 2003 the following additional spill prevention and control measures will be implemented:

- Chips and sawdust and absorbent padding will be kept in stock at all times.
- A routine inspection program with check-off listing of tanks, piping, valves, hoses and pumps for the prevention of both major spills and also for minor spills or leakage through improper maintenance.

10.0 SPILL RESPONSE PLAN

This section provides guidelines for the initial response of containing and reporting a release of petroleum products. Depending upon the nature and extent of a release, some of the guidelines presented below may not necessarily apply in every situation. For example, a spill during

refueling operations may not necessarily present a life threatening situation and the release may be easily and immediately stopped by the person who discovered the spill. However, employees should follow the guidelines to the extent necessary to insure personal safety, yet provide prompt control and containment of the release.

10.1 Spill Response Actions:

- The person discovering the release must immediately get assistance from other employees, if the extent of the release warrants it, to help get the situation under control. The shift supervisor and/or the designated facility spill coordinator should be notified as soon as the situation allows it.
- Ascertain the immediate safety hazards associated with the release (i.e. fire, explosion, or vapor hazards). Any hazardous condition that presents a threat to public and personnel safety must first be mitigated before personnel attempt to control or stop the release. Depending upon the severity of any hazardous condition, the jurisdictional fire department should be notified.
- Take immediate actions, within the limits of personal safety and only after hazardous conditions have been identified and mitigated, to stop the release.
- Take immediate action to prevent any further release of the substance into the environment. Efforts should be made to contain the release within the smallest area possible. This can be accomplished with sandbags or loose soil, and/or booms or pads. If the substance is in immediate danger of entering a catch basin or other conveyance to public waters (storm sewer, roadside ditch, or stream) then attempts should be made to prevent the release from reaching these points. This can also be accomplished with sandbags or loose soil, and/or oil booms or pads.
- Once hazardous conditions have been mitigated, the release has been stopped and the substance contained, the appropriate regulatory agencies should be notified within 24 hours of discovering the release. The following releases must be reported to the DOE within 24 hours:
 - A. All below-ground releases from an underground storage tank system in any quantity;
 - B. All above-ground releases to land in excess of 42 gallons, or less than 42 gallons if the owner is unable to contain or clean up the release within 24 hours; and
 - C. All aboveground releases to water which result in sheen on the water.
- The shift supervisor or the designated facility spill coordinator should notify the appropriate state, federal, and local regulatory agencies as listed in Section 12.2 in the order listed. Explain as much about the release as possible and be prepared with information about:
 - A. The type of product released.
 - B. The quantity of product released.
 - C. The nature and location of the release.

- Has the release been stopped and contained? If not, what is the likelihood that any substance will enter public waters?
- What initial response has been taken to contain the release?
- What initial abatement measures have been taken to clean up the released substance and any contaminated soils?
- Have any other regulatory agencies been notified?

11.0 INITIAL ABATEMENT MEASURES

Abatement measures required to clean up a spill will vary in magnitude depending upon the severity and nature of the release. Facility personnel can easily clean up a small spill resulting in only a few gallons of product being released by removing any free product and/or contaminated soils. A release of large volumes of product or a release that results in groundwater or surface water contamination will require greater manpower, equipment forces, and technical equipment for proper remediation. For large releases, it is best to seek the advice and expertise of a qualified consultant or cleanup contractor. In many cases, the jurisdictional regulatory agency may require specific measures be taken and can recommend qualified consultants and contractors. The following is a partial list of qualified spill cleanup contractors who can respond to emergency spill situations:

Cowlitz Clean Sweep
Astoria, Oregon
(503) 338-0173

IT Corporation
Finley, Ohio
(800) 537-9540

Spencer Environmental Services, Inc.
Portland, Oregon
(503) 788-4612

Foss Environmental, Inc.
Portland, Oregon
(800) 290-1655

12.0 SPILL EMERGENCY PHONE NUMBERS

This section provides telephone numbers of key personnel who should be notified in case of a release, as well as the numbers of regulatory agencies that may have to be notified depending upon the magnitude and severity of the release.

12.1 Facility Contact Personnel

**FACILITY SPILL PREVENTION
COORDINATOR**

Bill Cook
Port of Astoria Marine Service Center
Office: (503) 325-4521
Security: (503) 791-7735

12.2 Jurisdictional Agencies

Cowlitz County Emergency Services	911
Coast Guard Marine Safety Office	1-(503) 424-8802
Chemical Transportation Emergency Center (CHEMTREC)	1-(800)-424-8802

13.0 AMENDMENT OF SPCC PLAN BY OWNER/TENANT

The owner shall amend the Plan within six months of a change in facility design, construction, operation or maintenance, which materially affects the facility's potential for the discharge of petroleum product into public waters.

The Plan shall also be reviewed and evaluated by the owner at least once every three years to determine if the plan should be amended in part or in whole. The Plan should be amended if more effective and field proven prevention and control technology is available that will significantly reduce the likelihood of a spill event from the facility.

A Professional Engineer in accordance with CFR 112.3(d) shall certify any amendments to the SPCC Plan.

APPENDIX C

REPORT FORMS

PORT OF ASTORIA – MARINE SERVICE CENTER
ASTORIA, OREGON

FIELD DATA SHEET/CHAIN-OF-CUSTODY RECORD

NPDES STORMWATER DISCHARGE PERMIT NO. 107184/A (1200-Z)

Page 1 of 2

DATE	OUTFALL NUMBER	SAMPLE BTL #	SAMPLING TIME	FLOW	pH	OIL & GREASE	REMARKS

CHAIN-OF-CUSTODY RECORD

Relinquished By (Signature)	Representing	Date/Time	Received By (Signature)	Representing	Date/Time
Relinquished By (Signature)	Representing	Date/Time	Received For Laboratory By (Signature)		Date/Time

PORT OF ASTORIA – MARINE SERVICE CENTER
ASTORIA, OREGON

FIELD DATA SHEET/CHAIN-OF-CUSTODY RECORD

NPDES STORMWATER DISCHARGE PERMIT NO. 107184/A (1200-Z)
Page 2 of 2

DATE	OUTFALL NUMBER	SAMPLE BTL#	SAMPLING TIME	TSS mg/l	Total Copper mg/l	Total Lead mg/l	Total Zinc mg/l

CHAIN-OF-CUSTODY RECORD

Relinquished By (Signature)	Representing	Date/Time	Received By (Signature)	Representing	Date/Time
Relinquished By (Signature)	Representing	Date/Time	Received For Laboratory By (Signature)		Date/Time

PORT OF ASTORIA – MARINE SERVICE CENTER
ASTORIA, OREGON

MONITORING RECORD

NPDES STORMWATER DISCHARGE PERMIT NO. 107184/A (1200-Z)

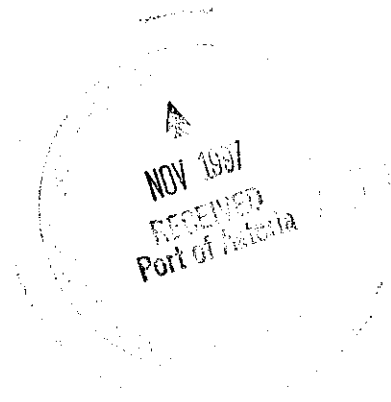
Time	Outfall Number	Flow	Color and Foam	Sample BOT #	Oil Sheen	Comments/Action Taken

DATE: _____ RAINFALL: _____
TIME: _____ OBSERVER: _____

APPENDIX D
NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM PERMIT –
PORT OF ASTORIA

November 3, 1997

Ron Larsen
Port of Astoria
1 Portway
Astoria, OR 97103



Re: NPDES General Permit 1200Z
Port of Astoria
Astoria Airport
Warrenton, OR 97146
File No. 108272/A
Clatsop County

The Oregon Department of Environmental Quality has received your application for renewal of National Pollutant Discharge Elimination System (NPDES) General Permit No. 1200 and the appropriate fees and is enclosing the requested permit. Additionally, we are enclosing a memo dated September 22, 1997 which discusses changes to the new NPDES General Permit 1200Z.

Please read the permit and the enclosed memo carefully to become familiar with the terms and conditions to which you must comply. We ask that you particularly observe the monitoring and reporting requirements outlined on pages 9 and 10 of the permit.

Should you have any questions, please contact the Northwest Region Office at 229-5552.

Sincerely,

A handwritten signature in cursive script that reads "Neil J. Mullane".

Neil J. Mullane, Manager
Water Quality Source Control
Northwest Region

Handwritten initials "Ed" above the name "Coleman" in cursive script.

rcd
Enclosures
cc: File

John A. Kitzhaber
Governor



2020 SW Fourth Avenue
Suite 400
Portland, OR 97201-4987
(503) 229-5263 Voice
TTY (503) 229-5471

State of Oregon

Department of Environmental Quality

Memorandum

To: Holders of NPDES General Permit 1200 (D-W) **Date:** September 22, 1997

From: Rene C. Dulay *rcd*

Subject: NPDES General Permit 1200Z Renewal

On July 22, 1997, the Department of Environmental Quality renewed the National Pollutant Discharge Elimination System (NPDES) General Permit 1200 (D, F, G, H, L, M, P, R, S, T, & W). These general permits cover the facilities identified in 40CFR§122.26(b)(14)(i-ix, xi) and with storm water discharges.

You should be aware of the following changes of the new permit which are as follows:

- The previous NPDES General Permits 1200 (D, F, G, H, L, M, P, R, S, T and W) were consolidated into one NPDES General Permit 1200Z. Table I on pages 2-3 shows the sources covered by the new permit.
- The Storm Water Pollution Control Plan (SWPCP) shall be prepared by a person knowledgeable in storm water management and familiar with the facility. It does not necessarily need a registered engineer or architect to review and stamped the SWPCP. The SWPCP shall be signed according to the procedures specified in the federal regulation, 40CFR§122.22.
- If waste disposal wells will be used for surface drainage the requirements of Oregon Administrative Rules (OAR) 340-44-050 must be complied with. The wastewater that could be discharged to disposal wells is restricted to storm water only.
- Categorical industries such as cement manufacturing, steam powered electric power generation facilities with coal handling and storage facilities and asphalt paving and roofing emulsions manufacturing must meet their respective effluent limitations specified on page 7 of the permit.
- Benchmarks are established for pollutants of concern (see page 8) for each point source storm water discharge. The benchmarks are guideline concentrations and not limitations. Sampling frequency is specified in Schedule B. If the benchmarks are not achieved the SWPCP has to be reviewed within 60 days of receiving the sampling results and identify additional control to further improve the quality of the storm water discharge.

Please read the enclosed permit and be familiar with all the conditions and requirements including the conditions emphasized above.

If you have any questions regarding the permit please contact the Northwest Region office at 229-5552

GENERAL PERMIT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORM WATER DISCHARGE PERMIT

Department of Environmental Quality
811 Southwest Sixth Avenue, Portland, OR 97204
Telephone: (503) 229-5279

Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO:

All Owners Or Operators Of Storm Water Point
Source Discharges That Are Covered By This
Permit

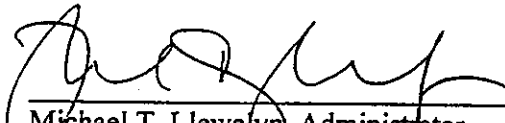
Issued 11-03-97 GEN12Z CLATSOP/NWR
File No. 108272 ORR80-0319

Port of Astoria
1 Portway
Astoria OR 97103
Site: Astoria Airport, Warrenton OR 97146

SOURCES COVERED BY THIS PERMIT

Facilities identified in 40 Code of Federal Regulation (CFR) §122.26(b)(14)(i-ix, xi) with storm water discharges. Construction activities, asphalt mix batch plants, concrete batch plants and Standard Industrial Classification code 14, *Mining and Quarrying of Nonmetallic Minerals, Except Fuels* are excluded from this permit. These activities are regulated under separate permits.

See Table 1: Sources Covered, pages 2-3, for more information on the CFR regulated industries covered by this permit.



Michael T. Llewellyn, Administrator
Water Quality Division

JULY 22, 1997
Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate storm water treatment and/or control facilities, and to discharge storm water to public waters in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

		<u>Page</u>
Schedule A	- Storm Water Pollution Control Plan, Additional Requirements, Limitations, and Benchmarks	4-8
Schedule B	- Monitoring and Reporting Requirements	9-10
Schedule C	- Compliance Conditions and Schedules	11
Schedule D	- Special Conditions	12
Schedule F	- General Conditions	13

Unless authorized by another NPDES permit, all other direct and indirect discharges to public waters are prohibited.

TABLE 1: Sources Covered

Previous Permit Type	Sources Covered
1200-D	<p>Facilities with the following primary Standard Industrial Classification codes:</p> <ul style="list-style-type: none"> 21 Tobacco Products 22 Textile Mill Products 23 Apparel and Other Finished Products Made From Fabrics and Similar Material 27 Printing, Publishing and Allied Industries 4221 Farm Product Warehousing and Storage 4222 Refrigerated Warehousing and Storage 4225 General Warehousing and Storage <p>Facilities with SIC codes 22, 23, 27, 4221, 4222, and 4225 are only required to apply for permit if storm water is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.</p>
1200-F	<p>Facilities with primary Standard Industrial Classification code 20 Food and Kindred Products. Facilities with this SIC code are only required to apply for permit if storm water is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.</p>
1200-G	<p>Landfills, land application sites and open dumps.</p>
1200-H	<p>Facilities with the following primary Standard Industrial Classification codes:</p> <ul style="list-style-type: none"> 28 Chemicals and Allied Products (excluding 2874 Phosphate Fertilizer Manufacturing) 29 Petroleum Refining and Related Industries 30 Rubber and Miscellaneous Plastics Products 31 Leather and Leather Products 32 Stone, Clay, Glass, and Concrete Products 33 Primary Metal Industries <p>and Steam Electric Power Generation including coal handling sites.</p> <p>Facilities with SIC codes 283, 285, 30, 31 (except 311), and 323 are only required to apply for permit if storm water is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.</p>
1200-L	<p>Facilities with the following primary Standard Industrial Classification codes:</p> <ul style="list-style-type: none"> 34 Fabricated Metal Products, Except Machinery and Transportation Equipment 35 Industrial and Commercial Machinery and Computer Equipment 36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment 37 Transportation Equipment 38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks 39 Miscellaneous Manufacturing Industries <p>Facilities with SIC codes 34 (except 3441), 35, 36, 37 (except 373), 38, and 39 are only required to apply for permit if storm water is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.</p>

TABLE 1: Sources Covered (cont.)

Previous Permit Type	Sources Covered
1200-M	Facilities with the following primary Standard Industrial Classification codes: 10 Metal Mining 12 Coal Mining 13 Oil and Gas Extraction
1200-P	Facilities with primary Standard Industrial Classification code 26 Paper and Allied Products. Facilities with SIC codes 265 and 267 are only required to apply for permit if storm water is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.
1200-R	Hazardous Waste Treatment, Storage and Disposal Facilities, and facilities with primary Standard Industrial Classification codes 5015 Motor Vehicle Parts, Used, and 5093 Scrap and Waste Materials.
1200-S	Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, recycling, and reclamation of municipal or domestic sewage (including land dedicated to the disposal of sewage sludge that are located within the confines of the facility) with the design flow capacity of 1.0 mgd or more, or required to have a pretreatment program under 40 CFR § 403.
1200-T	Facilities with the following primary Standard Industrial Classification codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations: 40 Railroad Transportation 41 Local and Suburban Transit and Interurban Highway Passenger Transportation 42 Motor Freight Transportation and Warehousing (excluding 4221 Farm Product Warehousing and Storage, 4222 Refrigerated Warehousing and Storage, and 4225 General Warehousing and Storage) 43 United States Postal Service 44 Water Transportation 45 Transportation by Air 5171 Petroleum Bulk Stations and Terminals
1200-W	Facilities with the following primary Standard Industrial Classification codes: 24 Lumber and Wood Products, Except Furniture (excluding 2491 Wood Preserving and 2411 Logging) 25 Furniture and Fixtures Facilities with SIC codes 2434 and 25 are only required to apply for permit if storm water is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.

SCHEDULE A
STORM WATER POLLUTION CONTROL PLAN

1. **Preparation and Implementation of the Storm Water Pollution Control Plan (SWPCP)**
 - a) The SWPCP shall be prepared by a person knowledgeable in storm water management and familiar with the facility.
 - b) The SWPCP shall be signed in accordance with 40 CFR §122.22. Updates and revisions to the SWPCP shall also be signed in this manner. The SWPCP shall be signed as follows:
 - i) For a Corporation - By a principal executive officer of at least the level of vice president;
 - ii) For a Partnership or Sole Proprietorship - By a general partner or the proprietor, respectively; or
 - iii) For a Municipality, State, Federal, or other Public Facility - By either a principal executive officer or ranking elected official.
 - c) The SWPCP shall be prepared and implemented according to the time frames set forth in Schedule C.
 - d) The SWPCP shall be kept current and updated as necessary to reflect any changes in facility operation.
 - e) The SWPCP and updates to the SWPCP shall be submitted to the Department in accordance with Schedule B.3.
 - f) A copy of the SWPCP shall be kept at the facility and made available upon request to government agencies responsible for storm water management in the permittee's area.

2. **Storm Water Pollution Control Plan Requirements**
 - a) **Site Description** The SWPCP shall contain the following information:
 - i) A description of the industrial activities conducted at the site. Include a description of the significant materials (see Schedule D.3, Definitions) that are stored, used, treated and/or disposed of in a manner that allows exposure to storm water. Also describe the methods of storage, usage, treatment and/or disposal.
 - ii) A general location map showing the location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features.
 - iii) A site map including the following:
 - (1) drainage patterns
 - (2) drainage and discharge structures
 - (3) outline of the drainage area for each storm water outfall
 - (4) paved areas and buildings within each drainage area
 - (5) areas used for outdoor manufacturing, treatment, storage, and/or disposal of significant materials
 - (6) existing structural control measures for reducing pollutants in storm water runoff
 - (7) material loading and access areas
 - (8) hazardous waste treatment, storage and disposal facilities
 - (9) location of wells including waste injection wells, seepage pits, drywells, etc.
 - (10) location of springs, wetlands and other surface water bodies.
 - iv) Estimates of the amount of impervious surface area (including paved areas and building roofs) relative to the total area drained by each storm water outfall.
 - v) For each area of the site where a reasonable potential exists for contributing pollutants to storm water runoff, identify the potential pollutants that could be present in storm water discharges.
 - vi) The name(s) of the receiving water(s) for storm water drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters and the name of the municipality.

- vii) Identification of the discharge outfall(s) and the point(s) where storm water monitoring will occur as required by Schedule B. If multiple discharge outfalls exist but will not all be monitored (as allowed in Schedule B.1.c), a description supporting this approach shall also be included.
- b) **Site Controls** The permittee shall maintain existing controls and/or develop new controls appropriate for the site. The purpose of these controls is to eliminate or minimize the exposure of pollutants to storm water. In developing a control strategy, the SWPCP shall have the following minimum components. A description of each component shall be included in the SWPCP.
- i) *Storm Water Best Management Practices* If technically and economically feasible, the following best management practices shall be employed at the site. A schedule for implementation of these practices shall be included in the SWPCP if the practice has not already been accomplished. This schedule must be consistent with the requirements for developing and implementing the SWPCP in Schedule C of the permit.
- (1) Containment - All hazardous materials (see Schedule D.3, Definitions) shall be stored within berms or other secondary containment devices to prevent leaks and spills from contaminating storm water. If the use of berms or secondary containment devices is not possible, then hazardous materials shall be stored in areas that do not drain to the storm sewer system.
 - (2) Oil and Grease - Oil/Water separators, booms, skimmers or other methods shall be employed to eliminate or minimize oil and grease contamination of storm water discharges.
 - (3) Waste Chemicals and Material Disposal - Wastes shall be recycled or properly disposed of in a manner to eliminate or minimize exposure of pollutants to storm water. All waste contained in bins or dumpsters where there is a potential for drainage of storm water through the waste shall be covered to prevent exposure of storm water to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.
 - (4) Erosion and Sediment Control - Erosion control methods such as vegetating exposed areas, graveling or paving shall be employed to minimize erosion of soil at the site. Sediment control methods such as detention facilities, sediment control fences, vegetated filter strips, bioswales, or grassy swales shall be employed to minimize sediment loads in storm water discharges. For activities that involve land disturbance, the permittee shall contact the local municipality to determine if there are other applicable requirements.
 - (5) Debris Control - Screens, booms, settling ponds, or other methods shall be employed to eliminate or minimize debris in storm water discharges.
 - (6) Storm Water Diversion - Storm water shall be diverted away from fueling, manufacturing, treatment, storage, and disposal areas to prevent exposure of uncontaminated storm water to potential pollutants.
 - (7) Covering Activities - Fueling, manufacturing, treatment, storage, and disposal areas shall be covered to prevent exposure of storm water to potential pollutants. Acceptable covers include, but are not limited to, permanent structures such as roofs or buildings and temporary covers such as tarps.
 - (8) Housekeeping - Areas that may contribute pollutants to storm water shall be kept clean. Sweeping, prompt clean up of spills and leaks, and proper maintenance of vehicles shall be employed to eliminate or minimize exposure of storm water to pollutants.

- ii) *Spill Prevention and Response Procedures* Methods to prevent spills along with clean-up and notification procedures shall be included in the SWPCP. These methods and procedures shall be made available to appropriate personnel. The required clean up material shall be on-site or readily available. Spills prevention plans required by other regulations may be substituted for this provision providing that storm water management concerns are adequately addressed.
 - iii) *Preventative Maintenance* A preventative maintenance program shall be implemented to ensure the effective operation of all storm water best management practices. At a minimum the program shall include:
 - (1) Monthly inspections of areas where potential spills of significant materials or industrial activities could impact storm water runoff.
 - (2) Monthly inspections of storm water control measures, structures, catch basins, and treatment facilities.
 - (3) Cleaning, maintenance and/or repair of all materials handling and storage areas and all storm water control measures, structures, catch basins, and treatment facilities as needed upon discovery.
 - iv) *Employee Education* An employee orientation and education program shall be developed and maintained to inform personnel of the components and goals of the SWPCP. The program shall also address spill response procedures and the necessity of good housekeeping practices. A schedule for employee education shall be included in the SWPCP.
- c) **Record Keeping and Internal Reporting Procedures** The following information shall be recorded and maintained at the facility and provided to the Department and other government agencies upon request. This information does not need to be submitted as part of the SWPCP.
- i) Inspection, maintenance, repair and education activities as required by the SWPCP.
 - ii) Spills or leaks of significant materials that impacted or had the potential to impact storm water or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

ADDITIONAL REQUIREMENTS

3. **Oregon Administrative Rule (OAR) 340-44-50, Waste Disposal Wells for Surface Drainage** OAR 340-44-50 requires that waste disposal wells for storm drainage only be used in those areas where there is an adequate confinement barrier or filtration medium between the well and an underground source of drinking water; and where construction of surface discharging storm sewers is not practical. In addition, this rule requires the following:
- a) New storm drainage disposal wells shall be as shallow as possible but shall not exceed a depth of 100 feet.
 - b) Disposal wells shall be located at least 500 feet from domestic water wells.
 - c) Using a disposal well for agricultural drainage is prohibited.
 - d) Using a disposal well for surface drainage in areas where toxic chemicals or petroleum products are stored or handled is prohibited unless there is containment around the product area which will prevent spills and leaks from entering the well.
 - e) Any owner or operator of the disposal well shall have available a means of temporarily plugging or blocking the well in the event of an accident of spill.
 - f) Any area that is drained by a disposal well shall be kept clean of petroleum products and other organic or chemical wastes as much as practicable to minimize the degree of contamination of the storm water drainage.

4. **Oregon Administrative Rule 340-41-26(3)(a)(D), Surface Water Temperature Management Plan** Individual storm water discharges are not expected to cause a measurable increase in stream temperature. Compliance with this permit meets the requirement of OAR 340-41-26(3)(a)(D) to develop and implement a surface water temperature management plan. If it is determined that storm discharges in a particular basin are impacting a Total Maximum Daily Load for temperature, then permittees in this basin will be required to implement additional management practices to reduce the temperature of the discharges. These practices include, but are not limited to, increased vegetation to provide for shading, underground conveyance systems or detention vaults, and filter treatment systems to reduce detention times.
5. **Storm Water Only** This permit only regulates the discharge of storm water. It does not authorize the discharge or on-site disposal of process wastewater, wash water, boiler blowdown, cooling water, air conditioning condensate, deicing residues, or any other non-storm discharges associated with the facility.

Any other wastewater discharge or disposal must be permitted in a separate permit. A separate Department permit may not be required if the wastewater is reused or recycled without discharge or disposal, or discharged to the sanitary sewer with approval from the local sanitary authority.

6. **Specific River Basin Requirements** The permittee shall comply with any Oregon Administrative Rule requirements for storm water management specific to the applicable river basin.
7. **Water Quality Standards** The ultimate goal for permittees is to comply with water quality standards in OAR 340-41. In instances where a storm water discharge adversely impacts water quality, the Department may require the facility to implement additional management practices, apply for an individual permit, or take other appropriate action.

CODE OF FEDERAL REGULATION STORM WATER DISCHARGE LIMITATIONS

8. The permittee with the following activities shall be in compliance with the applicable limitations at the time of permit assignment:

CFR Industry Category	Parameter	Limitation	
Cement manufacturing facilities for runoff from material storage piles (40 CFR §411)	pH	6.0 - 9.0 SU	
	Total Suspended Solids (TSS)	50 mg/l	
Steam powered electric power generation facilities with coal handling and storage facilities (40 CFR §423)	TSS	50 mg/l, Daily Maximum	
Manufacturing of asphalt paving and roofing emulsions (40 CFR §443)	Oil & Grease	20 mg/l, Daily Maximum	15 mg/l, 30 Day Average
	pH	6.0 - 9.0 SU	

STORM WATER DISCHARGE BENCHMARKS

9. **Benchmarks** Benchmarks are guideline concentrations not limitations. They are designed to assist the permittee in determining if the implementation of their SWPCP is reducing pollutant concentrations to below levels of concern. For facilities that are subject to federal limitations, benchmarks apply to only those pollutants that are not limited by the federal regulations. The following benchmarks apply to each point source discharge of storm water associated with industrial activity:

Parameter	Benchmark
Total Copper	0.1 mg/l
Total Lead	0.4 mg/l
Total Zinc	0.6 mg/l
pH	5.5 - 9 S.U.
Total Suspended Solids	130 mg/l
Oil & Grease	10 mg/l
** E. coli	406 counts/100 ml
Floating Solids (associated with industrial activities)	No Visible Discharge
Oil & Grease Sheen	No Visible Sheen

** The benchmark for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

10. **Review of SWPCP** If benchmarks are not achieved, the permittee shall review their SWPCP within 60 days of receiving sampling results. The purpose of this review is to determine if the SWPCP is being followed and to identify any additional technically and economically feasible site controls that need to be implemented to further improve the quality of storm water discharges. These site controls include best management practices, spill prevention and response procedures, preventative maintenance, and employee education procedures as described in Schedule A.2.b.
- SWPCP Revision** Any newly identified site controls shall be implemented in a timely manner and incorporated into the SWPCP as an update. A new SWPCP is not required. If no additional site controls are identified, the permittee shall state as such in an update to the SWPCP.
 - SWPCP Revision Submittal** Results of this review shall be submitted to the Department in accordance with Schedule B.3 and made available upon request to government agencies responsible for storm water management in the permittee's area.
 - Background or Natural Conditions** If the permittee demonstrates that background or natural conditions not associated with industrial activities at the site cause an exceedance of a benchmark, then no further modifications to the SWPCP are required for that parameter. Upon successful demonstration of natural or background conditions through monitoring of the same storm event used to evaluate benchmarks the permittee would be eligible for the monitoring reduction as outlined in Schedule B.2.

**SCHEDULE B
MONITORING AND REPORTING REQUIREMENTS**

I. Minimum Monitoring Requirements

- a) All permittees shall monitor storm water associated with industrial activity for the following:

GRAB SAMPLES OF STORM WATER	
Parameter	Frequency
Total Copper	Twice per Year
Total Lead	Twice per Year
Total Zinc	Twice per Year
pH	Twice per Year
Total Suspended Solids	Twice per Year
Oil & Grease	Twice per Year
**E. coli	Twice per Year

**The monitoring for E.coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

VISUAL MONITORING OF STORM WATER	
Parameter	Frequency
Floating Solids (associated with industrial activities)	Once a Month (when discharging)
Oil & Grease Sheen	Once a Month (when discharging)

- b) **Grab Samples** Grab samples that are representative of the discharge shall be taken at least 60 days apart. It is preferred, but not required, that one sample be collected in the fall and one in the spring. Compositing of samples from different drainage areas is not allowed.
- c) **Multiple Point Source Discharges** The permittee may reduce the number of storm water monitoring points provided the outfalls have substantially identical effluents. Substantially identical effluents are discharges from drainage areas serving similar activities where the discharges are expected to be similar in composition. Outfalls serving areas with no exposure of storm water to industrial activities are not required to be monitored.
- d) **Monitoring Location** All samples shall be taken at monitoring points specified in the SWPCP before the storm water joins or is diluted by any other wastestream, body of water or substance.
- e) **No Exposure** If there is no exposure of storm water to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery at the site, monitoring is not required. The permittee shall submit an annual statement certifying as such in lieu of monitoring (refer to Schedule B.3.b). If exposure cannot be prevented, the permittee shall comply with Schedule B.

2. Monitoring Reduction

- a) **Visual Observations** There is no reduction allowed of the required visual observations.
- b) **Grab Samples** The permittee is not required to conduct sampling if the benchmarks specified in Schedule A.9 are met, or if the exceedance is due to natural or background conditions for at least four consecutive storm water monitoring events over 24 continuous months. Note that there is no reduction in monitoring allowed for facilities subject to limitations under CFR (Schedule A.8).
 - i) Results from sampling events cannot be averaged to meet the benchmarks.
 - ii) Monitoring waivers may be allowed for individual parameters.
 - iii) Parameters in exceedance or not previously sampled shall be monitored as required in Schedule B.1 until the monitoring waiver condition above is met.
 - iv) Monitoring data from the previous permit period may be used to meet the waiver requirement. This data shall be evaluated against the benchmarks specified in this permit.
 - v) Monitoring data from the same storm event shall be used to demonstrate that background or natural conditions not associated with industrial activities at the site are contributing to the exceedance of a benchmark.
 - vi) The permittee shall submit written notification to the Department when exercising the monitoring waiver condition (refer to Schedule B.3.c).
- c) **Reinstatement of Monitoring Requirements**
 - i) The permittee shall conduct monitoring as specified in Schedule B.1 if changes to site conditions are expected to impact storm water discharge characteristics.
 - ii) The Department may reinstate monitoring requirements as specified in Schedule B.1 if prior monitoring efforts were improper or results were incorrect.
 - iii) Monitoring may also be reinstated if future sampling efforts indicate benchmarks are being exceeded.

3. Reporting Requirements The permittee shall submit the following to the appropriate DEQ regional office:

- a) **Monitoring Data** The permittee shall submit by July 15 of each year grab sampling and visual monitoring data for the previous monitoring period (July 1- June 30). If there was insufficient rainfall to collect samples, the permittee shall notify the Department by July 15 of each year.
- b) **No Exposure Certification** The permittee shall submit an annual certification by July 15 of each year if monitoring is not required due to no exposure of storm water to industrial activities. The certification shall state that site conditions have been evaluated and the facility meets the requirements of Schedule B.1.e.
- c) **Monitoring Reduction Notification** The permittee shall submit written notification when exercising the monitoring reduction condition in Schedule B.2.b.
- d) **SWPCP Update/Completion** The permittee shall prepare or update the SWPCP in accordance with Schedule C of the permit. The permittee shall submit an updated or completed SWPCP within 14 days after completion.
- e) **SWPCP Revision** The permittee shall submit any revisions to the SWPCP required by Schedule A.10 within 14 days after the SWPCP is revised. If the Department does not review and comment on the revised SWPCP within 30 days, the permittee shall implement the revisions as proposed.

**SCHEDULE C
COMPLIANCE CONDITIONS AND SCHEDULES**

1. **Existing Permittee** (for a facility with an NPDES storm water discharge permit assigned prior to September 30, 1996):
 - a) Not later than 90 days after receiving this permit, the existing permittee shall revise and begin implementation of their SWPCP to meet any new permit requirements.
 - b) Except for site controls that require capital improvements (see Schedule D.3, Definitions), the SWPCP shall be implemented within 90 days after revision of SWPCP. Site control activities that require capital improvements shall be completed in accordance with the schedule set forth in the SWPCP.
2. **New Permittee with Existing Facility** (for a facility operating prior to September 30, 1996, without an NPDES storm water discharge permit):
 - a) Not later than 90 days after receiving this permit, the new permittee shall prepare and begin implementation of their SWPCP.
 - b) Except for site controls that require capital improvements (see Schedule D.3, Definitions), the SWPCP shall be implemented within 90 days after completion of SWPCP. Site control activities that require capital improvements shall be completed in accordance with the schedule set forth in the SWPCP.
3. **New Facility** (for a facility beginning operation after September 30, 1996):
 - a) Prior to starting operations, a new facility shall prepare and begin implementation of their SWPCP.
 - b) Except for site controls that require capital improvements (see Schedule D.3, Definitions), the SWPCP shall be implemented within 90 days after beginning operation. Site control activities that require capital improvements shall be completed in accordance with the schedule set forth in the SWPCP.
4. **New Permittee Discharging to Clackamas River, McKenzie River above Hayden Bridge (River Mile 15) or North Santiam River.** Not later than 180 days after receiving this permit, new permittees discharging to Clackamas River, McKenzie River above Hayden Bridge (river mile 15) or North Santiam River shall submit to the Department a monitoring and water quality evaluation program. This program shall be effective in evaluating the in-stream impacts of the discharge as required by OAR 340-41-470. Within 30 days after Department approval, the permittee shall implement the monitoring and water quality evaluation program. New permittees are defined to include potential or existing dischargers that did not have a permit, and existing dischargers that have a permit but request an increased load limitation.

**SCHEDULE D
SPECIAL CONDITIONS**

1. **Releases in Excess of Reportable Quantities.** This permit does not relieve the permittee of the reporting requirements of 40 CFR §117 Determination of Reportable Quantities for Hazardous Substances and 40 CFR §302 Designation, Reportable Quantities, and Notification.
2. **Availability of SWPCP and Monitoring Data.** The Storm Water Pollution Control Plan and/or storm water monitoring data shall be made available to government agencies responsible for storm water management in the permittee's area.
3. **Definitions**
 - a) *Capital Improvements* means the following improvements that require capital expenditures:
 - i) Treatment best management practices including but not limited to settling basins, oil/water separation equipment, catch basins, grassy swales, and detention/retention basins.
 - ii) Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
 - iii) Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of storm water to treatment systems.
 - iv) Roofs and appropriate covers for manufacturing areas.
 - b) *Hazardous Materials* as defined in 40 CFR §302 Designation, Reportable Quantities, and Notification.
 - c) *Material Handling Activities* include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.
 - d) *Point Source* means a discharge from any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, or conduit.
 - e) *Significant Materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with storm water discharges.

SCHEDULE F
NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations

Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to \$10,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution, if committed by a person with criminal negligence, is punishable by a fine of up to \$25,000 or by imprisonment for not more than one year, or by both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, a person who knowingly discharges, places or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape into the waters of the state, is subject to a Class B felony punishable by a fine not to exceed \$200,000 and up to 10 years in prison.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee shall correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application shall be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permittee shall comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilitiesa. Definitions

- (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.(1) Bypass is prohibited unless:

- (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (c) The permittee submitted notices and requests as required under General Condition B.3.c.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

c. Notice and request for bypass.

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset

- a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the causes(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
 - (4) The permittee complied with any remedial measures required under General Condition A.3 hereof.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event

For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definitions

- (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
- (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
- (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

b. Prohibition of overflows. Overflows are prohibited unless:

- (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
- (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years or both.

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency shall also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged as specified in this permit.

8. Retention of Records

Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

- a. The date, exact place, time and methods of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittee shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. If the permittee is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected;
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
- e. Public notification steps taken, pursuant to General Condition B.7.

The following shall be included as information which must be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
- b. Any upset which exceeds any effluent limitation in this permit.
- c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected; and
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

9. Falsification of Reports

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed \$100,000 per violation and up to 5 years in prison.

10. Changes to Indirect Dischargers - [Applicable to Publicly Owned Treatment Works (POTW) only]

The permittee must provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;

- b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

11. Changes to Discharges of Toxic Pollutant - [Applicable to existing manufacturing, commercial, mining, and silvicultural dischargers only]

The permittee must notify the Department as soon as they know or have reason to believe of the following:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (4) The level established by the Department in accordance with 40 CFR 122.44(f).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (4) The level established by the Department in accordance with 40 CFR 122.44(f).

SECTION E. DEFINITIONS

- 1. BOD means five-day biochemical oxygen demand.
- 2. TSS means total suspended solids.
- 3. mg/l means milligrams per liter.
- 4. kg means kilograms.
- 5. m³/d means cubic meters per day.
- 6. MGD means million gallons per day.
- 7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
- 8. FC means fecal coliform bacteria.
- 9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-41.
- 10. CBOD means five day carbonaceous biochemical oxygen demand.
- 11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
- 12. Quarter means January through March, April through June, July through September, or October through December.
- 13. Month means calendar month.
- 14. Week means a calendar week of Sunday through Saturday.
- 15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
- 16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
- 17. POTW means a publicly owned treatment works.