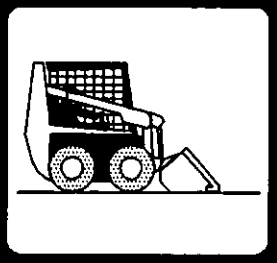


East Marine View Drive Widening and Legion Memorial Golf Course Improvements
Independent Remedial Action Report
Everett, Washington

Prepared For:

City of Everett
Public Works Department
Everett, Washington

and

City of Everett
Parks and Recreation Department
Everett, Washington

Prepared By:

Hydrometrics, Inc.
Tacoma, Washington

December 1998

Hydrometrics, Inc.

EAST MARINE VIEW DRIVE WIDENING
AND
LEGION MEMORIAL GOLF COURSE IMPROVEMENT

INDEPENDENT REMEDIAL ACTION REPORT

City of Everett Public Works and Parks and Recreation Departments
EVERETT, WASHINGTON

Prepared for:
Mr. Dave Davis, Public Works Department
and
Mr. Jay Magill, Parks and Recreation Department
City of Everett
Everett, Washington

Prepared By:
Hydrometrics, Inc.
5219 N. Shirley Street, Suite 100
Ruston, WA 98407

December 1998

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

OVERVIEW AND SUMMARY

An independent remedial action was conducted by the City of Everett Public Works and Parks and Recreation Departments (City) for two public transportation and recreation projects in Everett, Washington. Both projects are located within a Model Toxics Control Act (MTCA) study area that is known to have arsenic-contaminated soil, referred to as the Everett Smelter Site. The two projects are the East Marine View Drive Widening project and the Legion Memorial Golf Course Improvement project. Figure 1 depicts the site locations of the two projects and the current MTCA study area boundary.

BACKGROUND

After project planning and design had begun, the City learned that the project sites were in the Everett Smelter Site. Ecology is in the process of developing a cleanup action plan (CAP) for the Everett Smelter Site and did not see a need to delay these two important public works projects while the plan for the entire site is completed (agency correspondence is provided in Appendix B to this report). It is expected that the actions described in this report will ultimately be incorporated into Ecology's final CAP.

Ecology considers these two projects to be independent interim actions (Ecology April 1, 1997 Letter to City, Appendix B). As encouraged by Ecology, City staff coordinated their planning on these projects with the site investigation and cleanup planning underway for the Everett Smelter Site. The remedial actions that were implemented in conjunction with these two projects have been designed to be consistent with the remedial actions being considered for the overall smelter site and to enable Ecology to review an independent remedial action report and to issue a "No Further Action" letter upon completion of these two projects.

PROJECT DESCRIPTION AND REMEDIAL ACTIONS PERFORMED

East Marine View Drive serves as a major arterial that connects north Snohomish County at Broadway with the Everett waterfront. The City's comprehensive plan adopted under the Growth Management Act identifies the need to widen East Marine View Drive to provide additional transportation capacity to the Everett waterfront and is a key component and the last transportation improvement for the U.S. Navy Homeport project at Everett. The widening is identified as a mitigation measure in the Homeport environmental impact statement and is being funded with state and federal funds.

The East Marine View Drive project consists of widening the roadway from two lanes to three and four lanes to five from approximate Stations 10 (east) to 54 (west) as shown in Figure 2. The roadway was widened approximately 10 to 12 feet on both the north and south sides of the existing roadway. The south side was cut while the north side required fill. A sidewalk was constructed along the north side.

The remedial work was accomplished as part of the construction of the roadway project. Most excavated soil with arsenic concentrations above MTCA Method A residential soil cleanup levels was used for backfill or for subgrade bed for the widened roadway. Approximately 1,650 cubic yards of excavated soil was stockpiled and then transported to the ASARCO Incorporated (Asarco) Smelter Site in Tacoma, Washington. Utility trenches were backfilled with clean material. Table 1 summarizes activities performed, explains any differences from the work plan, and provides completion dates for various project subtasks. The project was completed in November, 1998.

The Legion Memorial Golf Course project consisted of repairing and rehabilitating the 145 acre golf course to support the needs of a growing population. The improvements implemented the Legion Golf Course Master Plan, approved in 1996, and the Parks and Recreation Comprehensive Plan, amended in 1996. The improvements consisted of re-locating greens, re-grading fairways and tees, landscaping, and improving drainage. An

addition to the clubhouse was constructed along with expanding the size of the parking lot.

The remedial work was accomplished as part of the regrading of the golf course renovations. In general, as greens and tees were rebuilt and fairways regraded, four-to-six inches of sand, followed by topsoil and sod, were used to cap the underlying soils. All excavated soil with arsenic concentrations above MTCA Method A residential soil cleanup levels were incorporated into the landscaping under berms and mounds in the rough. Utility trenches were backfilled with clean material. Confirmational monitoring will be conducted in the new drainage ponds (see Section 1.6). Table 2 summarizes activities performed, explains any differences from the work plan, and provides completion dates for various project subtasks. It is anticipated that all construction activities will be completed in early 1999. Remaining tasks are not directly associated with remedial activities and therefore, do not affect submittal of this independent remedial action report.

Before proceeding with the two projects and development of the remedial design work plans, Ecology suggested that the City characterize the arsenic and lead concentrations in soils more thoroughly than existing data allowed. The City retained Hydrometrics, Inc. to complete soil sampling in order to more completely characterize both site locations and develop independent remedial action work plans (Hydrometrics 1996 and Hydrometrics 1997). Each work plan was submitted to Ecology and included the laboratory data and tasks that would be completed to provide appropriate remedial actions. Appropriate remedial actions were discussed between the City and Ecology to ensure that they would be consistent with the remedial actions being considered in the CAP for the Everett Smelter Site. Public and agency review was also provided on both projects through the SEPA process (see Section 2.2 and Appendix F).

Consistent with Ecology's technical advice, the remedial actions performed reduced or eliminated short and long term potential for exposure to arsenic-contaminated soils. In addition, the actions do not affect or foreclose cleanup options for the remaining Everett Smelter Site.

REPORT FORMAT

This report describes the work conducted during the construction activities performed at both projects and was prepared using the Independent Remedial Action Program (IRAP) guidelines set forth in Ecology guidance (Ecology 1994). This program, also called the voluntary cleanup program, allows Ecology to issue a "No Further Action" letter and to re-designate sites upon satisfactory review of the project's remedial actions.

Ecology's IRAP guidance for reports contains two sections. Section 1 of the report provides minimum information required for Ecology's review while Section 2 provides additional information on groundwater, regulatory records/permits, hazardous substance management, and corrective actions at dangerous waste facilities. Ecology's IRAP guidance also requires the completion of the Site Summary Form which is included in Appendix A. Relevant correspondence that occurred with agencies is included as Appendix B.

TABLE 1
EAST MARINE VIEW DRIVE
COMPLETED REMEDIAL WORK PLAN
TASK SCHEDULE

Task Completed	Date Task Completed	Comparison To Work Plan
• Conducted 24 hour safety training for workers coming in contact with soils and an additional 8 hours for supervisors.	• August, 1997	• Same
• Trees, brush, and shrubs were cut at the ground surface and reused as hog fuel.	• September, 1997 and March, 1998	• Same
• Excavated stumps, removed clinging soil, and reused as hog fuel.	• September to October, 1997 and February to March, 1998	• Same
• Stripped organic material, sampled the stockpile, and transported to Tacoma Smelter.	• Stripped on September, 1997 and March, 1998 and hauled on June, 1998	• Upon receiving approval from EPA and Ecology, the organic material classified as problem waste was managed at Tacoma Smelter rather than a Subtitle D facility.
• Reused excavated soil from the south side as backfill on the north side. • Excavated clean glacial till (estimated 12,000 cy) for reuse by the City (estimated 5,000 cy) and the Port of Everett (estimated 7,000 cy). • Nine till samples were collected from test pits prior to excavation with additional samples being collected from the stockpile at the Port of Everett's Baywood site.	• September, 1997 to November, 1997 • March to May, 1998 • Test pit samples were collected August, 1996. Stockpile samples were collected twice in June, 1998.	• Approximately 4,700 cubic yards (cy) was removed from the south side. About 2,000 cy was used as fill on the north side per plan. Because the project needed more imported structural fill than originally anticipated, not all of the soil could be reused on-site. Approximately 1,000 cy was glacial till with arsenic concentrations below 20 ppm and was stockpiled at the Port of Everett for reuse (see next bullet). The remaining 1,700 cy was topsoil classified as problem waste and was managed with the organic material, because sampling indicated that arsenic concentrations were greater than 20 ppm. This material went to the Tacoma Smelter facility (see previous bullet). • Approximately 14,000 cy of clean glacial till was excavated for reuse (4,000 cy stockpiled at the City's old landfill and 10,000 cy stockpiled at the Port of Everett). • Till samples were not collected every 50 linear feet. An initial nine samples were collected prior to excavation with subsequent samples being collected from the Port of Everett stockpile.

TABLE 1 Continued
EAST MARINE VIEW DRIVE
COMPLETED WORK PLAN TASK SCHEDULE

Task Completed	Date Task Completed	Comparison To Work Plan
• The storm drain and natural gas trenches were excavated and backfilled with clean import material.	• September to November, 1997	• Same
• Capped entire roadway and installed a shallow groundwater interceptor drain.	• September, 1997 to July, 1998	• Same
• Applied water suppressant for dust control.	• July, 1998	• Same
• Conducted air quality monitoring.	• Twice in September, 1997 and once in May, 1998.	• Same
• Did not disturb soils in ROW currently under structures or impermeable barriers.	• November, 1998	• Same
• Did not disturb soils covered with an impervious surface in residential properties that are adjacent to the roadway.	• November, 1998	• Same
• No brick or debris were encountered during excavation.	• NA.	• NA
• Implemented institutional controls.	• Ongoing.	• Same

TABLE 2
LEGION MEMORIAL GOLF COURSE
COMPLETED REMEDIAL WORK PLAN
TASK SCHEDULE

Task Completed	Date Task Completed	Comparison To Work Plan
• Conducted 24 safety training for workers coming in contact with soils and an additional 8 hours for supervisors.	• June, 1997	• Same
• *Drain tile trenches were excavated and backfilled with clean import material.	• June, 1998	• Same
• *Installed and routed drain tile to collector lines and drainage ponds to capture surface water infiltration and to discharge into the City's secondary treatment plant.	• June, 1998	• Same
• *Any trees, shrubs, and bushes that required removal were relocated on-site.	• Early 1999	• Same
• At least four inches of sand along with top soil and sod were added to the fairways, greens, and tees.	• June, 1998	• Fairway 12 will be top dressed periodically rather than being capped.
• Covered sample location S302 (identified in the work plan) near the main parking lot with asphalt while expanding the parking lot.	• September, 1997	• The area near sample location S201 (identified in the work plan) was not covered with asphalt because the City elected not to construct the trailer parking lot.
• Soils were not disposed off-site; therefore, waste categories were not an issue.	• NA	• NA
• *Conducted air quality monitoring.	• Three times in June, 1997; five times in July, 1997; five times in August, 1997; and once in September, 1997.	• Same
• Implemented institutional controls including a deed restriction.	• Fall/Winter, 1998	• Same
• The three drainage ponds will be sampled annually and analyzed for arsenic for the next five years.	• December, 1998 to December, 2002	• Same

* Added to work plan prior to commencement of work.

SECTION ONE

1.0 PROJECT BACKGROUND / SITE DESCRIPTION

The East Marine View Drive project consisted of widening the current two lane portion of the roadway to three lanes and the current four lane to five lanes from Stations 10 (east) to 54 (west) as shown in Figure 2 and constructing a sidewalk along the north side. The roadway was widened approximately 10 to 12 feet on both the north and south sides of the existing roadway. Generally, the south side was cut while the north side required fill. The widening was necessary to provide additional transportation capacity to the Everett waterfront and is the last transportation improvement for the U.S. Navy Homeport project at Everett.

The Legion Memorial Golf Course project consisted of repairing and rehabilitating the 145 acre golf course to support the needs of a growing population. The improvements consisted of re-grading the fairways, adding new tees and greens, adding new sand traps, and improving the drainage system. The clubhouse was remodeled to include additional restaurant space and the parking lot was expanded.

Additional project background is presented in the Overview and Summary. The Site Summary Form is included as Appendix A, as noted above.

1.0.1 Location

A.1. Site Name - East Marine View Drive Widening Project.

B.1. Current Land Use - public street; Zoned: M-2 (heavy manufacturing).

C.1. Street Address - East Marine View Drive from Alverson Boulevard to Broadway.

D.1. Phone Number - (425) 257-8800; Dave Davis, Public Works Department.

E.1. Map of Site Location - see Figure 1.

A.2. Site Name - Legion Memorial Golf Course Improvement Project.

B.2. Current Land Use - public park; Zoned: Park.

C.2. Street Address - 144 West Marine View Drive.

D.2. Phone Number - (425) 257-8300; Jay Magill, Parks and Recreation Department.

E.2. Map of Site Location - see Figure 1.

1.0.2 Topography and Geology

A. Site Diagram

Both projects are located in northeast Everett (see Figure 1). The East Marine View Drive project begins at approximate Station 10 (west) and extends east to approximate Station 54. Legion Memorial Golf Course is an 18 hole course with a clubhouse and parking lot that comprises approximately 145 acres. A large segment of the East Marine View Drive project (approximate Stations 10 to 34) is adjacent to the northern boundary of the Legion Memorial Golf Course.

Several figures were needed to provide the requested information for site diagrams in a legible form. A brief overview of these figures may assist the reader:

- Figures 2 through 6 are large-scale figures (see pockets at end of report) showing the projects as-builts, utilities with clean backfill, the topography, and the sampling locations. The first three figures show the site following construction, Figure 5 shows the site prior to construction, and Figure 6 shows the layout before and after construction.

- Figures 7 through 14 show the arsenic concentrations in soil. Figures 7 through 10 show arsenic concentration contour lines based on sampling results prior to project construction, and will, therefore, not reflect the exact depth under current (post-project) conditions. Figures 11 through 13 show the location of residual contamination, which reflects current conditions. Figure 14 shows the stockpile sampling locations. The current golf course layout is also shown in relation to the isopleths on Figures 7 through 10. This information was included on these figures so that they can be used in the future to help locate the isopleths on the site, if necessary, even though the contaminated soils are actually at a greater depth than shown (because of the capping work described in this report and shown on other figures).

The following provides a more detail description of Figures 2 through 5. Figure 2 shows the site diagram for the East Marine View Drive project as constructed including:

- Site boundary.
- Area that is capped with asphalt and concrete.
- Surface structures including a newly constructed rock wall and retaining wall.

Figure 3 shows the site diagram for Legion Memorial Golf Course as constructed including:

- Site boundary.
- Newly constructed drainage ponds (areas of excavation).
- Newly constructed fairways, greens, tees, and sand traps (areas of excavation and capped areas).
- Clubhouse.
- Expanded parking lot (capped area).

Figure 4 shows new utility trenches that were excavated and backfilled with clean import material for both projects. These utility trenches comprise the relevant subsurface structures. The East Marine View Drive area had the following utilities installed with clean backfill:

- Storm drain line.
- Storm drain line /groundwater interceptor drain.
- Natural gas line.

Legion Memorial Golf Course had the following utilities installed with clean backfill:

- Drain tile associated with the three drainage ponds.
- PUD/GTE lines.
- Interceptor drain lines (note that these lines were installed prior to the recent construction activities).

Figure 5 shows the site surface topography prior to completing these two projects (note that data are not currently available for a small area along East Marine View Drive). A steep bluff exists north of East Marine View Drive. The remaining site generally slopes gently down from the eastern portion of the golf course toward the northeast, north, northwest, and west.

B. Site Soil Types

Soil within the project area is characterized as glacial sediments deposited during the last advance of glaciers. Generally, the project locations are underlain by a thick layer of glacial till over by a deeper sequence of advance outwash deposits. The till is covered at the surface by a layer of fill comprised of silt, and sand and gravel (Hydrometrics 1995).

In the golf course, samples were collected to a depth of two feet and the lithology was not logged. For the East Marine View Drive project, three borings were advanced to depths up to 24.5 feet (GeoEngineers 1995). In addition, GeoEngineers also advanced 30 shallow hand borings (GeoEngineers 1996). The hand boring logs were attached as Appendix A in the East Marine View Drive Independent Remedial Action work plan (Hydrometrics, 1996).

C. Other Site Information

Surface water was not identified at either project location. The only surface water features that exists in the site are the three new drainage ponds constructed by the City for the golf course (identified as lakes in Figure 3). Surface water runoff is generally collected in catch basins or the ponds which is routed through the combined storm-sanitary sewer to the Everett Sewage Treatment Plant.

Shallow groundwater was not encountered at any locations. Only one boring from GeoEngineers investigation indicated groundwater at a depth of 17 feet. However, GeoEngineers stated that groundwater conditions will fluctuate seasonally and a perched groundwater condition could be expected along a portion of East Marine View Drive. Therefore, the City installed a groundwater interceptor drain along this portion of East Marine View consisting of a french drain (see Figure 4). Groundwater was not noted in the french drain during construction.

1.1 RELEASE INFORMATION / SITE CHARACTERIZATION

A. Release Information

Background information regarding contaminant releases and site characterization relative to the Everett Smelter Site is contained in the Everett Smelter Site Remedial Investigation (Hydrometrics 1995) and supplemental studies (Ecology 1998). Prior to commencing the East Marine View Drive and Legion Memorial Golf Course projects, the City learned that

some portion of both projects were located within the Everett Smelter Site. In November, 1997, Ecology expanded the study area based on data it collected which resulted in the entire area of both projects being located within the Everett Smelter Site as shown in Figure 1.

Upon learning the projects were located within the Everett Smelter Site, the City undertook further site characterization. GeoEngineers and Hydrometrics performed pre-remedial sampling investigations followed by the development of independent remedial action work plans for both projects (Hydrometrics 1996 and Hydrometrics 1997). Section 2.1 in both of these work plans present soil data collected and subsequent site characterization. The work plans, developed in consultation with Ecology, were submitted to Ecology. In addition, any pre-remedial sampling data collected after the submittal of the work plans was submitted to Ecology (see Section 1.2).

Samples were collected from a total of 59 locations at the East Marine View Drive site and 120 locations at the Legion Memorial Golf Course. Data is summarized in Tables 3 and 4 for East Marine View Drive and Legion Memorial Golf Course, respectively. Sampling locations for both projects are shown in Figure 6.

B. Contaminants of Concern

Contaminants of concerns for both projects are arsenic and lead in soil.

C. Extent of Contamination

Soil is the media affected by the contaminants of concern. Soil data is discussed in more detail in Section 1.2. Generally, most of the southern side of the East Marine View Drive site has arsenic concentrations greater than Method A residential soil cleanup levels to at least four feet in depth in some areas. Most of the northern side of East Marine View Drive does not have arsenic concentrations greater than Method A residential soil cleanup levels until approximately Station 30. Here, arsenic extends to a depth of at least two feet in some areas. Significant data was not collected below depths of four feet on the south

side and below two feet on the north side because native till was encountered below these depths. A summary of the data is listed in Table 3.

Approximately one-third to one-half of Legion Memorial Golf Course had arsenic concentrations greater than Method A residential soil cleanup levels, depending on the soil depth. In general, most of the soil with arsenic concentration that is greater than Method A residential soil cleanup levels is on the upper, northeastern portion of the course within the top 12 inches. Along the eastern edge (including short holes 12 and 13), arsenic concentrations greater than Method A residential soil cleanup levels have been detected to depths of at least four feet. A summary of the data is listed in Table 4.

Pre-construction arsenic iso-contours for both projects for depths of 0 to 6 inches, 6 to 12 inches, 12 to 18 inches, and greater than 18 inches are shown on Figures 7 through 10 respectively. The methodology for establishing iso-contours is described in Appendix C of the Legion Memorial Golf Course Independent Remedial Action work plan (Hydrometrics 1997).

Please note that although these data were obtained prior to the project, the current golf course layout is shown in relation to the isopleths on Figures 7 through 10. It would have been confusing to show the data relative to physical features that no longer exist, especially for agency staff and maintenance personnel who did not know the golf course layout prior to its renovation. This information was included on these figures so that the figures can be useful in the future to help locate the isopleths on the site, if necessary, even though the contaminated soils are actually at a somewhat greater depth than shown.

Laboratory data indicates that a few isolated areas contain lead concentrations greater than Method A residential soil cleanup levels, mostly along East Marine View Drive. However, sufficient occurrences were not detected to generate meaningful figures for lead iso-contours. In addition, isolated areas that contain lead concentrations greater than

Method A residential soil cleanup levels generally contain arsenic concentrations greater than Method A residential soil cleanup levels.

D. Sensitive Species or Environments

No known sensitive species or environments are threatened by the arsenic and lead concentrations detected in soils.

E. Potential Threats to Public Health

For greater discussion on potential threats to public health, see the Everett Smelter Site Remedial Investigation (Hydrometrics 1995). With respect to these two City projects, Ecology determined that these projects were independent interim actions (Ecology April 1, 1997 Letter to City, see Appendix B); interim actions are taken to reduce potential threats to human health and the environment (WAC 173-340-430(1)).

1.2 PREVIOUS INVESTIGATIONS

Pre-remedial sampling information in addition to the Everett Smelter Site studies (Hydrometrics 1995), the independent remedial work plans (Hydrometrics 1996 and Hydrometrics 1997), and supplemental studies (Ecology 1998) includes test pit sampling on the south side of East Marine View Drive and Asarco's analyses of archived Legion Memorial Golf Course samples (see Appendix B).

1.3 SELECTION OF CLEANUP STANDARDS

A. Cleanup Levels

In a letter from Ecology to the City dated December 18, 1995, Ecology stated the cleanup level for the site was 7 parts per million (ppm) for arsenic (based on background levels) and 250 ppm for lead (based on Method A residential soil cleanup level) (see Appendix B). In 1996, Ecology changed the cleanup level for arsenic to Method A which

established a cleanup level of 20 ppm. Therefore, the resulting cleanup level for arsenic in soil is 20 ppm and 250 ppm for lead.

The cleanup level is one component of the cleanup standard. As part of the establishment of cleanup standards and selection of remedy in the CAP, an action level establishes contaminant concentrations related to site specific remedial activities, including any institutional controls. Ecology has not yet established final action levels for different areas in the Everett Smelter Site, such as residential properties, right-of-ways, commercial sites, parks, and industrial sites; these will be identified in Ecology's CAP.

B. Points of Compliance

As noted in Section 1.1 A, the entire site including East Marine View Drive and Legion Memorial Golf Course is within the Everett Smelter Site. Although the point of compliance would be a depth of 15 feet as specified in WAC 173-340-740(6)(c), cleanup actions that involve containment will not be met at that depth, as noted in WAC 173-340-740(6)(d). The cleanup may be determined to meet cleanup standards under this section if the remedial action includes long term monitoring and institutional controls.

C. ARARs

Snohomish Health District regulates the management of material classified as problem waste. The Snohomish Health District has defined problem waste as soil from the Everett Smelter Site Study Area that contains contaminant concentrations above state cleanup levels and below state dangerous waste levels. Therefore, soils may be classified as problem wastes if all of the following conditions are met:

- Soil is excavated and managed off-site.
- Soil contains concentrations above the MTCA Method A residential soil cleanup levels of 20 ppm arsenic or 250 ppm lead.

- Soil contains arsenic concentrations below 760 ppm based on arsenic trioxide and lead concentrations below 10,000 ppm (state dangerous waste levels based on book designation, WAC 173-303-100 (5)(b)).

1.4 EXPLANATION OF REMEDIAL ACTIONS TAKEN AND RATIONALE FOR SELECTING THE REMEDIAL ACTION

A. Remedial Action Selected

The independent remedial action work plans identified remedial actions to be performed by the City based on available soil data and informal consultation with Ecology. A combination of remedial technologies were employed. These tasks are summarized in Tables 1 and 2 for East Marine View Drive and Legion Memorial Golf Course, respectively. In summary, the main remedial actions performed by the City involves:

- Reuse of soils with arsenic concentrations above 20 ppm in appropriate locations for backfill or subgrade bed at both project sites.
- Separation and reuse of glacial till excavated from the East Marine View Drive project site and tested for contamination.
- Off-site disposal at an approved facility for soil determined not to be suitable for reuse.
- The use of engineering controls by containing (i.e., capping) East Marine View Drive with asphalt or concrete for the main roadway and topsoil and sod or landscaping material for some of the right-of-way area.
- The use of engineering controls by containing (i.e., capping) the fairways, greens, and tees (except for fairway 12), at Legion Memorial Golf Course with a minimum of four to six inches of sand, topsoil, and sod.
- Backfilling utility trenches with clean material.
- Long-term monitoring and institutional controls (see Section 1.5).

Capping was determined appropriate for both projects due to the large volumes of problem waste that would be generated in a removal action that contain relatively low levels of hazardous substances (WAC 173-340-360 (9)(c)).

Most of the specific information regarding the performance of the remedial actions specified in the work plans are provided in Tables 1 and 2. The following subsections provide additional background or information on these tasks.

B. Reuse and Engineering Controls

The grading and remedial tasks for both projects involved excavation and reuse of as much soil with arsenic concentrations above 20 ppm as possible as backfill material for the construction project, which was then capped. This method is similar to the accepted reuse of petroleum-contaminated soil in appropriate locations. The rationale for reuse was that the soil did not pose a threat to human health or the environment at the concentrations identified if the soil remained isolated under the roadway or clean soil, turf, and landscaping that will be maintained by the City. On the Marine View Drive project, the soil was used for the subgrade bed of the road, and then paved. In addition, some soil was used to backfill the hillside along a narrow stretch adjacent to the road which was then landscaped (see Figure 11).

On the Legion Memorial Golf Course project, the surface soils that were graded or excavated (e.g., drainage ponds) were reused as subgrade for new elevated greens and tees, which were then capped with four to six inches of sand, followed by one to two inches of topsoil and sod. All sand traps are within the sand capped areas as well; they were constructed with four to six inches of clean granular subgrade (for drainage) and sand. Where grading did occur in the rough, soils that had been graded or excavated were used to form the base of mounds, berms, sandtraps, and similar elevated or topographic

features, followed by topsoil and sod for the mounds and berms and sand for the sandtraps. Where grading did not otherwise occur, soils in the rough were not disturbed.

In general, the entire course lying southwest of a line roughly drawn between the center of the 1st, 6th, and 14th fairways (the "lower" portion of the course) was regraded. Because of the mature trees on the northeast ("upper") portion of the course, the tees, fairways, and greens were the main areas regraded, rather than the rough. As noted on Table 1, the entire fairway 12 did not receive a sand cap (note that the tees and greens were rebuilt with sand caps). The City will regularly topdress this fairway with clean sand and soil in its golf course maintenance to maintain the protective layer, as part of institutional controls (see Section 1.5).

Figure 11 shows the approximate areas that contain residual soils with arsenic concentrations greater than 20 ppm for East Marine View Drive. Some areas that indicated arsenic concentrations greater than 20 ppm from pre-remedial sampling at any depth are shown as well as an area on the north side that used soils cut from the south side as fill (approximate Station 22 to Skyline). Also, two areas on the south side (approximate Station 17 to the golf course entrance and Skyline to the overpass ramp) had soil removed to depths below 7 feet which was well into the till. Therefore, based on sampling of till (see test pit results in Table 3), the City believes that these areas do not contain soil with arsenic concentrations greater than 20 ppm. Lastly, the southern landscaped portion of East Marine View Drive within the cloverleafs was not sampled; therefore, it is unknown if soil with arsenic concentrations greater than 20 ppm exist. However, no soils are exposed and any disturbed soils were capped by road or sidewalk construction. Figure 11 also shows that much of the East Marine View Drive area is paved.

Figures 12 and 13 show the approximate areas that contain residual soils with arsenic concentrations greater than 20 ppm for Legion Memorial Golf Course from the surface to a depth of six inches and greater than a depth of six inches, respectively. Figure 12 now illustrates that about two-thirds of Legion Memorial Golf Course does not have soil with arsenic concentrations greater than 20 ppm at the surface to a depth of six inches. Areas where arsenic concentrations are below 20 ppm are those where direct contact or exposure is most likely to occur. As shown in Figure 12, much of the remaining one-third is area that is not in play or covered with an impervious surface or structure (e.g. buildings, parking lot, peripheral areas). All peripheral areas not covered with a structure or impervious surface however, including those with arsenic concentrations above 20 ppm, are protected with a layer of turf.

Figure 13 shows the area that contains soil with arsenic concentrations greater than 20 ppm remaining at depth. Drainage ponds were excavated to depths of approximately six to 12 feet into glacial till. Therefore, the City believes that these areas do not contain soils with arsenic concentrations above 20 ppm. Areas identified in Figures 12 and 13 have been estimated based on pre-remedial sampling.

Other remedial actions that were conducted include the installation of a shallow groundwater interceptor trench (i.e., french drain) along a portion of East Marine View Drive (see Figure 4). Although groundwater was not encountered during construction activities, this action was taken in case a perched groundwater condition occurred seasonally near this portion of East Marine View Drive. At Legion Memorial Golf Course, the parking lot near the clubhouse was also expanded. This expansion capped an additional area with low permeability asphalt. Because the thickness of paving is less than six inches and the foundation of the clubhouse may contain soil with arsenic concentration above 20 ppm (e.g., crawl space), the paved parking and clubhouse area is included on Figure 12 even though the area is capped with an impervious surface.

C. Utility Trench Backfill

Utility trenches with clean import backfill were discussed in Section 1.0.2 A and are shown in Figure 4. Trenches were backfilled with clean import material to prevent future maintenance work workers from coming into contact with potentially contaminated soils and to avoid having to manage problem waste in the future. Excavated soils from the utility trenching at Legion Memorial Golf Course were used as subgrade backfill for landscaping along the fairways or as a base for berms. Excavated soil from the utility trenching at East Marine View Drive were managed off-site (see Section D below).

D. Separation, Reuse, and Off-Site Disposal

Because the majority of the work at Legion Memorial Golf Course involved increasing the surface elevation to improve drainage, off-site disposal of excavated soil was not necessary. All soils excavated during re-grading were used as subgrade backfill for landscaping at the fairways or were used as a base for berms.

For the East Marine View Drive project, some materials were disposed off-site. Trees, brush, and shrubs at East Marine View Drive were cut to the ground surface, chipped for hog fuel, and hauled to the Kimberly-Clark paper mill located adjacent to the Port of Everett's Baywood site. Due to Ecology's concern of conifer trees absorbing arsenic, a sample of a Douglas Fir was analyzed prior to chipping the material. Laboratory results indicated that arsenic was detected at a concentration of 5 ppm (see fir results in Table 3); therefore, this material was not classified as problem waste. In addition, soil was removed from stumps which were subsequently managed at Kimberly-Clark with the trees, brush, and shrubs.

The City originally intended to utilize all soil cut from the south side of the road that had arsenic concentrations greater than 20 ppm as fill on the north side. In addition to removing soil from the south side, the City also estimated that approximately 12,000 cubic yards of clean soil would result from the project and be available for reuse: 5,000 cubic yards at the City's old landfill and 7,000 cubic yards at the Port of Everett's Baywood site (see Attachment 2 of the City's January 24, 1997 letter to Ecology in Appendix B). The excavation to remove approximately 12,000 cubic yards of clean soil was needed for the following reasons:

- To complete the required grade.
- To allow space in the north side for most of the soil from the south side (fill) that had arsenic concentrations greater than 20 ppm.
- To allow sufficient space for import structural fill because the contractor determined that the topsoil cut from the south side along with the soil (fill and glacial till) present on the north side was not suitable as structural fill for the north side construction.

Upon completing the project, a total of approximately 17,700 cubic yards were excavated from the roadway (4,700 cubic yards from the south side and 13,000 cubic yards from the north side). To minimize off-site disposal of problem waste per the work plan, the City maximized as much natural glacial till in the project area with arsenic concentrations less than 20 ppm for excess material (see test pits results in Table 3) as possible. This action limited the volume of problem waste generated that required off-site disposal.

The 4,700 cubic yards cut from the south side consisted of fill, clean glacial till, and topsoil and was managed as follows:

- 2,000 cubic yards of fill with arsenic concentrations greater than 20 ppm was placed in the north side as subgrade backfill per the work plan.
- 1,000 cubic yards of clean glacial till was stockpiled at the Port of Everett's Baywood site for reuse with the material from the north side as described below.
- 1,700 cubic yards of topsoil with arsenic concentrations greater than 20 ppm was stockpiled and contained at the Port of Everett's Baywood site and managed as described below.

The 1,700 cubic yards of topsoil with arsenic concentrations greater than 20 ppm was classified as problem waste (see Section 1.6 B). This material was stockpiled at the Port of Everett's Baywood site (see topsoil stockpile in Figure 14) and temporarily contained by placing the material on plastic sheeting and covering it with polyethylene. The City negotiated with Asarco to use the material at the Tacoma Smelter Superfund Site as subgrade backfill for the Tacoma remediation. After Asarco received approval from EPA and Ecology (see Appendix B), the City hauled the material to the Tacoma Smelter in June, 1998. Copies of the scale tickets are included as Appendix C.

The 13,000 cubic yards cut from the north side consisted of clean glacial till and was stockpiled at the Port of Everett's Baywood Site (see till stockpile in Figure 14). As described above, the 1,000 cubic yards of till removed from the south side was stockpiled along with the 13,000 cubic yards of till from the north side resulting in a total of 14,000 cubic yards of clean glacial till. Approximately 4,000 cubic yards of this glacial till was subsequently hauled to the City's old landfill to be reused as intermediate cover while the remaining 10,000 cubic yards was left at the Port of Everett's Baywood site for reuse as fill by the Port (see Section 1.6 B and Figure 14).

Soil from the natural gas line trench excavated by Puget Sound Energy at East Marine View Drive was also disposed off-site. This trenching generated approximately 2,100 cubic yards of soil classified as problem waste. Asarco agreed to use the material generated by Puget Sound Energy at the Tacoma Smelter as subgrade backfill. The soils were hauled to the Tacoma Smelter in October, 1997.

1.5 INSTITUTIONAL CONTROLS

WAC 173-340-430 requires institutional controls to limit or prohibit activities that may interfere with the integrity of an interim action or cleanup action. Institutional control measures are required at sites that have residual concentrations of hazardous substances which exceed MTCA Method A residential soil cleanup levels.

The City will implement the following institutional controls for Legion Memorial Golf Course:

- The City has prepared a deed restriction which meets the requirements of WAC 197-11-440 (including review by the city planning department) to ensure notice, cap integrity, and proper management of soils during maintenance activities (see Appendix D).
- The City will provide periodic topdressing (every few years, or as needed) to fairway 12 consisting of sand, soil, and/or sod.
- The City will implement a set of protective procedures for golf course maintenance crews, including training and protective clothing. As a practical matter, these measures will generally apply to landscaping and minor course modifications in areas where contamination remains a depth (see Figure 13). Since the utility trenches were backfilled with clean material, work will not require protective measures.

Aside from standard street maintenance, the institutional control applicable to the East Marine View Drive project is the City's Right-Of-Way (ROW) Use Permit System, as noted in the independent remedial action plan, and consistent with WAC 173-340-440(4)(b). Under this permit system, any proposed excavation or disturbance of the site will require prior City approval. In addition, as noted above, utility trenches were backfilled with clean material to prevent exposure during maintenance activities.

Unlike Legion Memorial Golf Course, the East Marine View Drive project area comprises a small portion of the existing roads and streets within the Everett Smelter Site. Ecology has indicated that the CAP is not likely to require the re-excavation of the existing public roads in the area, which are already capped with impervious surfaces. Whatever institutional controls are ultimately determined to apply to the entire street system for the Everett Smelter Site would therefore apply to the East Marine View Drive project site as well.

1.6 SAMPLING AND ANALYSIS

WAC 173-340-410 contains requirements for compliance monitoring consisting of the following:

- Protection Monitoring - Confirm that human health and the environment are adequately protected during construction.
- Performance Monitoring - Confirm that the interim action has attained cleanup levels.
- Confirmational Monitoring - Confirm the long-term effectiveness of the interim action.

A. Protection Monitoring

The Health and Safety Plans contained in the independent remedial action work plans did not require air or personal monitoring due to the low arsenic concentrations at both sites. However, the City elected to perform personal and peripheral monitoring during dry periods of construction. Air monitoring results are listed in Tables 5 and 6 for East Marine View Drive and Legion Memorial Golf Course respectively. Laboratory reports and chain-of-custody forms are located in Appendix E. Results indicate that no personal samples exceeded Permissible Exposure Limits (PELs) for arsenic or lead. In addition, results indicate that no peripheral samples exceeded a trigger level established by the City that are lower than the PELs.

B. Performance Monitoring

Performance monitoring was not performed at either site because the remedial action involved capping of soils with relatively low levels of arsenic concentrations as described in Sections 1.1 and 1.4. However, the topsoil and till stockpiles at the Port of Everett's Baywood site were sampled to determine if the material was above the Method A residential soil cleanup level of 20 ppm for arsenic. The topsoil and till stockpile sampling locations are shown in Figure 14. Laboratory reports and chain-of-custody forms are included in Appendix E.

Table 7 lists results of the first sampling round of the topsoil and till stockpiles. Four grab samples were collected from the topsoil stockpile and results indicated that the material was classified as problem waste. Subsequently, as discussed in Section 1.4 B, the topsoil stockpile was hauled to the Tacoma Smelter.

Previous experience from the Everett Smelter Site and samples collected from test pits indicated the glacial till would have arsenic concentrations below the Method A residential soil cleanup level of 20 ppm. To confirm this, the till stockpile at the Port of Everett's Baywood site was segregated into six windrows (see Figure 14). Four samples were collected at varying depths within each windrow and composited. Results indicated

that the most eastern windrow (sixth) contained arsenic concentrations of 66 ppm which are above the Method A residential soil cleanup level of 20 ppm.

A second sampling round was therefore conducted for the most eastern windrow (sixth) of the till stockpile. This windrow was segregated into four subunits and four sample locations per subunit were composited at three depth intervals including 0-6, 6-12, and 12-18 inches. Results are listed in Table 8 and indicate that the area of elevated arsenic detected in the first sampling round was in the top six inches of the north subunit. Figure 14 shows that this area was immediately adjacent to the topsoil stockpile and likely included some topsoil. Subsequently, the City removed the top six inches of the north subunit of the till stockpile and hauled it to the Tacoma Smelter along with the topsoil stockpile.

In summary, performance monitoring indicated the remaining till stockpile is not classified as a problem waste and therefore can be used as non-structural fill by the City and the Port of Everett.

C. Confirmational Monitoring

Confirmational monitoring addresses the long-term effectiveness of the remedial action. In the independent remedial action work plan, the City proposed to sample the three drainage ponds annually for five years to confirm the effectiveness of the remedial actions.

The City will conduct the first annual sampling in December, 1998. Subsequent annual sampling will be conducted during the month of December in years 1999 through 2002. Analytical results for each annual sampling will be forwarded to Ecology upon receiving the laboratory report.

SECTION TWO

2.0 INTRODUCTION

As explained in Section 1, groundwater was not encountered during construction activities. Regulatory records and permits are discussed in Section 2.2. Hazardous substance management and handling is discussed in Section 1 and therefore, Section 2.3 is not further discussed. Lastly, Section 2.4 which addresses corrective action at dangerous waste management facilities does not apply to these projects.

2.1 GROUNDWATER INVESTIGATION

Groundwater was not encountered during construction activities and therefore, is not further discussed.

2.2 REGULATORY RECORDS / PERMITS

The City conducted environmental review on these two public projects under the State Environmental Policy Act (SEPA), integrating this review with its remedial action planning. In addition, these projects were discussed at various public and community meetings on the status of the Everett Smelter Site.

The proposed independent remedial actions were identified in the SEPA documents and performance of the remedial work plan was made a condition of the mitigated determination of nonsignificance (MDNS) for each project (see Appendix F). Because the proposed East Marine View Drive project had previously undergone environmental review, an Addendum to the MDNS was issued for public and agency review on January 16, 1997. An MDNS for the proposed Legion Memorial Golf Course project was issued on February 24, 1997 for public and agency review. No adverse public comments were received.

A public works permit was required for Legion Memorial Golf Course. A copy of the permit is included in Appendix F. The City did not issue a public works permit for the East Marine View Drive project because it was managed by the Public Works Department.

Documentation of agency authorization for off-site disposal at the Tacoma Smelter is included in Appendix B.

2.3 HAZARDOUS SUBSTANCE MANAGEMENT AND HANDLING PRACTICES

State designated dangerous wastes or federally designated hazardous wastes were not encountered in the projects. Some excess soil from East Marine View Drive (topsoil) was, however, designated as problem waste. Management and handling is described in Section 1.4.

2.4 CORRECTIVE ACTION AT DANGEROUS WASTE MANAGEMENT FACILITIES.

This section does not apply to these projects.

REFERENCES

GeoEngineers, 1995. Geotechnical Engineering Services Proposed Roadway Widening East Marine View Drive. December 18.

GeoEngineers, 1996. Environmental Sampling and Chemical Analytical Testing East Marine View Drive. February 29.

Hydrometrics, Inc., 1995. Everett Smelter Site Remedial Investigation. September.

Hydrometrics, Inc., 1996. Independent Remedial Action Plan for East Marine View Drive. July.

Hydrometrics, Inc., 1997. Independent Remedial Action Plan for American Legion Memorial Golf Course. January.

Washington Department of Ecology, 1994. Guidance on Preparing Independent Remedial Action Reports Under the Model Toxics Control Act, Chapter 70.105D RCW, Publication No. 94-18. March 9.

Washington Department of Ecology, 1995. Dangerous Waste Regulations, Chapter 173-303 WAC, Publication No. 92-92. November.

Washington Department of Ecology, 1996. Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC, Publication No. 94-06. January.

Washington Department of Ecology, 1998. Supplemental site studies and reports that are available in Ecology's Smelter Site file.

TABLE 1
EAST MARINE VIEW DRIVE
COMPLETED REMEDIAL WORK PLAN
TASK SCHEDULE

Task Completed	Date Task Completed	Comparison To Work Plan
• Conducted 24 hour safety training for workers coming in contact with soils and an additional 8 hours for supervisors.	• August, 1997.	• Same
• Trees, brush, and shrubs were cut at the ground surface and reused as hog fuel.	• September, 1997 and March, 1998.	• Same
• Excavated stumps, removed clinging soil, and reused as hog fuel.	• September to October, 1997 and February to March, 1998.	• Same
• Stripped organic material, sampled the stockpile, and transported to Tacoma Smelter.	• Stripped on September, 1997 and March, 1998 and hauled on June, 1998.	• Upon receiving approval from EPA and Ecology, the organic material classified as problem waste was managed at Tacoma Smelter rather than a Subtitle D facility.
• Reused excavated soil from the south side as backfill on the north side. • Excavated clean glacial till (estimated 12,000 cy) for reuse by the City (estimated 5,000 cy) and the Port of Everett (estimated 7,000 cy). • Nine till samples were collected from test pits prior to excavation with additional samples being collected from the stockpile at the Port of Everett's Baywood site.	• September, 1997 to November, 1997. • March to May, 1998. • Test pit samples were collected August, 1996. Stockpile samples were collected twice in June, 1998.	• Approximately 4,700 cubic yards (cy) was removed from the south side. About 2,000 cy was used as fill on the north side per plan. Because the project needed more imported structural fill than originally anticipated, not all of the soil could be reused on-site. Approximately 1,000 cy was glacial till with arsenic concentrations below 20 ppm and was stockpiled at the Port of Everett for reuse (see next bullet). The remaining 1,700 cy was topsoil classified as problem waste and was managed with the organic material, because sampling indicated that arsenic concentrations were greater than 20 ppm. This material went to the Tacoma Smelter facility (see previous bullet). • Approximately 14,000 cy of clean glacial till was excavated for reuse (4,000 cy stockpiled at the City's old landfill and 10,000 cy stockpiled at the Port of Everett). • Till samples were not collected every 50 linear feet. An initial nine samples were collected prior to excavation with subsequent samples being collected from the Port of Everett stockpile.

TABLE 1 Continued
EAST MARINE VIEW DRIVE
COMPLETED WORK PLAN TASK SCHEDULE

Task Completed	Date Task Completed	Comparison To Work Plan
• The storm drain and natural gas trenches were excavated and backfilled with clean import material.	• September to November, 1997.	• Same
• Capped entire roadway and installed a shallow groundwater interceptor drain.	• September, 1997 to July, 1998.	• Same
• Applied water suppressant for dust control.	• July, 1998.	• Same
• Conducted air quality monitoring.	• Twice in September, 1997 and once in May, 1998.	• Same
• Did not disturb soils in ROW currently under structures or impermeable barriers.	• November, 1998.	• Same
• Did not disturb soils covered with an impervious surface in residential properties that are adjacent to the roadway.	• November, 1998.	• Same
• No brick or debris were encountered during excavation.	• NA.	• NA
• Implemented institutional controls.	• Ongoing.	• Same

TABLE 2
LEGION MEMORIAL GOLF COURSE
COMPLETED REMEDIAL WORK PLAN
TASK SCHEDULE

Task Completed	Date Task Completed	Comparison To Work Plan
• Conducted 24 safety training for workers coming in contact with soils and an additional 8 hours for supervisors.	• June, 1997	• Same
• *Drain tile trenches were excavated and backfilled with clean import material.	• June, 1998	• Same
• *Installed and routed drain tile to collector lines and drainage ponds to capture surface water infiltration and to discharge into the City's secondary treatment plant.	• June, 1998	• Same
• *Any trees, shrubs, and bushes that required removal were relocated on-site.	• Early 1999	• Same
• At least four inches of sand along with top soil and sod were added to the fairways, greens, and tees.	• June, 1998	• Fairway 12 will be top dressed periodically rather than being capped.
• Covered sample location S302 (identified in the work plan) near the main parking lot with asphalt while expanding the parking lot.	• September, 1997	• The area near sample location S201 (identified in the work plan) was not covered with asphalt because the City elected not to construct the trailer parking lot.
• Soils were not disposed off-site; therefore, waste categories were not an issue.	• NA	• NA
• *Conducted air quality monitoring.	• Three times in June, 1997; five times in July, 1997; five times in August, 1997; and once in September, 1997.	• Same
• Implemented institutional controls including a deed restriction.	• Fall/Winter, 1998	• Same
• The three drainage ponds will be sampled annually and analyzed for arsenic for the next five years.	• December, 1998 to December, 2002	• Same

* Added to work plan prior to commencement of work.

TABLE 3

EAST MARINE VIEW DRIVE PRE-REMOVAL SAMPLE RESULTS

Sample No.[1]	Sample Location[2]	From Fog line[3] (ft)	Surface Sample		Depth = 1 ft		Depth = 2 ft		Depth = 3 ft		Depth = 4 ft	
			Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
G-14	13 + 00	10 R	32	16	24	<10	<10	<10				
G-1	14 + 00	6 L	<10	15	<10	28			<10	110		
G-15	15 + 00	5 R	<10	39	<10	<10			<10	<10		
G-2	16 + 00	4.5 R	<10	250	<10	<10			<10	11		
G-16	17 + 00	5 R	77	30	73	<10			<10	<10		
H-14	17 +50	8 R	200	180								
G-3	18 + 00	4 L	<10	320	15	<10			<10	<10		
G-17	19 + 00	7 R	<10	<10	<10	<10			<10	<10		
G-4	20 + 00	4.5 R	<10	360	24	<10			<10	<10		
G-18	21 + 00	6 R	31	34	<10	<10	<10	<10				
G-5	22 + 00	8 L	<10	130	<10	<10			28	39		
H-15	22 + 75	8 R	73	350								
G-19	23 + 00	6 R	150	60	<10	<10			<10	<10		
H-16	23 + 25	8 R	80	360								
G-6	24 + 00	5 L	<10	60	<10	<10			13	14		
G-20	25 + 00	7 R	49	59	<10	<10			<10	<10		
G-7	26 + 00	6 L	<10	230	24	<10			<10	13		
G-21	27 + 00	8 R	19	57	<10	<10			<10	<10		
G-8	28 + 00	5 L	<10	230	<10	<10			<10	11		
G-22	29 + 00	10 R	20	40	<10	<10			<10	<10		
H-17	29 + 75	8 R	13	440								
G-9	30 + 00	6 L	73	320	<10	<10	33	36				
H-18	30 + 25	8 R	18	410								
G-23	31 + 00	8 R	<10	52	<10	<10			<10	<10		
G-10	32 + 00	5 L	<10	250	<10	35			51	65		
H-1	32 + 00	7 R			40	250	55	16				
H-2	32 + 25	6 R			35	93	46	58				
H-3	32 + 50	6 R			77	310	26	19				
H-9	32 + 50	6 L			130	180	15	40				
H-4	32 + 75	11 R			150	60	170	150	170	120	69	18
H-10	32 + 75	7 L			46	220	25	33				
G-24	33 + 00	10 R	58	77	350	44	840	70				
H-19	33 + 00	9 R					22	50	14	49		
H-20	33 + 00	10 R					44	130	18	79		
H-11	33 + 00	5 L			69	120	39	220				
H-5	33 + 25	8 R			92	62	21	50	25	54	60	320

TABLE 3 Continued

EAST MARINE VIEW DRIVE PRE-REMOVAL SAMPLE RESULTS

Sample No. [1]	Sample Location [2]	From Fog line [3] (ft)	Surface Sample		Depth = 1 ft		Depth = 2 ft		Depth = 3 ft		Depth = 4 ft	
			Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
H-12	33 + 25	7 L			32	170	38	110				
H-6	33 + 50	9 R			200	110	51	34	45	44	72	140
H-13	33 + 50	6 L			19	300	16	41				
H-7	33 + 75	6 R			100	200	480	180	45	36	35	100
G-11	34 + 00	8 L	<10	350	<10	<10			<10	<10		
H-8	34 + 00	11 R			100	39	140	70				
G-25	35 + 00	4 R	79	270	94	85			<10	<10		
G-12	36 + 00	3 L	<10	99	<10	15			13	30		
G-26	37 + 00	6 R	35	160	12	27			47	60		
G-30	38 + 00	5 L	<10	110	<10	<10			<10	<10		
G-27	39 + 00	6 R	<10	64	<10	<10			<10	14		
G-13	40 + 00	4 L	33	210	<10	<10			<10	<10		
G-29	42 + 00	5 L	23	280	<10	<10			<10	<10		
G-28	46 + 00	5 R	<10	250	<10	<10	<10	<10				
H-TP1	17 + 50	8 R							3	4		
H-TP2	19 + 00	8 R					3	4				
H-TP3	20 + 00	8 R					5	6				
H-TP4	21+ 00	8 R							3	4		
H-TP6	24 + 50	8 R					6	5				
H-TP7	26 + 00	8 R			8	7						
H-TP8	27 + 50	8 R					11	8				
H-TP9	29 + 00	8 R			4	4						
Fir	*		5									

Note 1: G-number is GeoEngineers sample and H-number is Hydrometrics sample.

Note 2: Sample location is approximate station location.

Note 3: R denotes distance from south fog line and L denotes distance from north fog line.

Note *: Douglas Fir sample was a grab sample of a small branch with needles, not a soil interval.

TABLE 4
LEGION MEMORIAL GOLF COURSE PRE-REMEDIAL SAMPLE RESULTS

Sample Location	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Fairway 1	1	42	50	101	43	<10	<20	<10	<20
	2	70	54	119	71	<10	<20	<10	<20
	3	31	38	38	47	42	49	53	59
	4	25	43	50	57	86	83	18	<20
	5	3.2	6.8	<10	<20	<10	<20	<10	<20
	6	11	18	<10	<20	<10	<20	<10	<20
	7	14	26	<10	<20	<10	<20	<10	<20
	8	17	28	<10	<20	<10	<20	<10	<20
Fairway 2	9	20	28	<10	<20	<10	<20	11	<20
	10	6	9.5	19	21	<10	<20	27	<20
	11	9.3	53	10	<20	<10	<20	<10	<20
	12	14	36	13	23	<10	<20	<10	<20
	13	17	91	17	<20	<10	<20	<10	<20
	14	10	49	<10	32	<10	<20	<10	<20
	15	13	34	<10	<20	<10	<20	<10	<20
Fairway 3	16	10	35	<10	<20	10	<20	15	<20
	17	16	40	<10	<20	<10	<20	<10	<20
	18	20	38	<10	<20	<10	<20	<10	<20
Fairway 4	19	17	35	10	<20	<10	<20	<10	<20
	20	10	23	<10	<20	<10	<20	<10	<20
	21	9.2	22	<10	<20	<10	<20	<10	<20
	22	8.5	21	13	<20	<10	<20	<10	<20
	23	24	46	26	38	14	<20	<10	<20
Fairway 5	24	6.4	13	11	<20	<10	<20	13	<20
	25	15	30	<10	<20	<10	<20	13	<20
	26	22	40	18	30	<10	<20	<10	<20
	27	15	25	<10	<20	<10	<20	<10	<20
	28	13	22	13	44	<10	<20	10	<20
	29	17	46	21	27	16	20	<10	<20
Fairway 6	30	29	59	31	44	<10	<20	<10	<20
	31	40	50	43	50	15	<20	<10	<20
	32	39	54	12	<20	<10	<20	<10	<20
	33	54	93	38	56	<10	<20	<10	<20
	34	48	64	24	29	<10	<20	<10	<20
	35	49	44	36	46	<10	<20	<10	<20

TABLE 4 Continued
LEGION MEMORIAL GOLF COURSE PRE-REMEDIAL SAMPLE RESULTS

Sample Location	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Fairway 7	36	110	93	47	70	13	<20	<10	<20
	37	46	45	<10	<20	<10	<20	<10	<20
	38	93	64	16	<20	<10	<20	<10	<20
	39	77	70	56	47	<10	<20	<10	<20
	40	7.5	5.7	76	60	16	<20	<10	<20
Fairway 8	41	46	50	73	62	66	43	31	24
	42	7.7	13	12	<20	26	<20	38	23
	43	90	74	40	35	<10	<20	<10	<20
	44	65	61	24	44	21	<20	<10	<20
	45	120	92	220	72	55	<20	<10	<20
	46	23	34	11	<20	<10	<20	<10	<20
	47	50	61	51	51	16	<20	<10	<20
Fairway 9	48	92	120	76	93	<10	<20	<10	<20
	49	75	81	65	60	27	<20	<10	<20
	50	80	83	120	107	43	36	34	28
Fairway 10	51	18	9.3	17	<20	15	<20	19	<20
	52	62	85	26	32	25	<20	<10	<20
	53	110	140	110	142	200	341	140	200
	54	45	29	13	<20	3.4	<20	<10	<20
	55	63	71	138	115	71	62	17	<20
	56	13	44	21	83	22	148	21	93
Fairway 11	57	140	200	230	425	190	148	37	<20
	58	46	38	5.4	<20	<10	<20	<10	<20
	59	83	83	176	137	36	24	<10	<20
	60	60	60	59	47	166	184	110	59
	61	120	120	55	46	12	<20	<10	<20
	62	58	70	129	125	155	159	27	<20
	63	14	130	22	64	<10	<20	<10	<20
Fairway 12	64	83	120	292	335	497	421	48	<20
	65	160	120	160	91	7.6	<20	<10	<20
	66	200	210	180	181	25	24	12	<20
	67	200	180	310	220	130	42	4.3	<20
	68	200	180	220	203	39	46	48	45
Fairway 13	69	25	59	28	83	35	84	62	66
	70	250	190	140	67	8	<20	<10	<20
	71	370	240	290	225	52	108	49	<20
	72	42	42	18	20	12	<20	14	<20

TABLE 4 Continued
LEGION MEMORIAL GOLF COURSE PRE-REMEDIAL SAMPLE RESULTS

Sample Location	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Fairway 14	73	42	45	<10	<20	<10	<20	<10	<20
	74	40	39	11	<20	10	<20	<10	<20
	75	65	65	125	115	56	48	<10	<20
Fairway 15	76	81	65	72	51	<10	<20	<10	<20
	77	4	5.8	<10	<20	91	67	91	80
	78	51	79	85	81	51	57	50	<20
	79	68	76	29	28	<10	<20	11	<20
	80	32	37	33	26	<10	<20	<10	<20
	81	47	48	27	25	<10	<20	<10	<20
	82	17	23	<10	<20	<10	<20	<10	<20
	83	26	44	29	53	14	<20	<10	<20
Fairway 16	84	33	43	20	20	<10	<20	<10	<20
	85	19	31	11	<20	<10	<20	13	<20
	86	36	50	<10	<20	<10	<20	<10	<20
	87	20	32	11	<20	<10	<20	<10	<20
	88	19	43	13	<20	<10	<20	11	<20
	89	15	63	<10	<20	<10	<20	10	<20
	90	6.1	24	<10	<20	<10	<20	<10	<20
Fairway 17	91	4.9	14	<10	<20	<10	<20	<10	<20
	92	2.2	5.6	<10	20	10	<20	<10	<20
	93	29	94	<10	<20	<10	<20	<10	<20
	94	35	54	13	<20	<10	<20	<10	<20
	95	16	30	11	<20	<10	<20	<10	<20
Fairway 18	96	24	43	51	52	12	<20	<10	<20
	97	29	44	37	37	17	<20	<10	<20
	98	54	67	17	20	12	<20	11	<20
	99	55	61	15	20	<10	<20	<10	<20
	100	52	48	64	36	18	<20	<10	<20
	101	56	68	36	32	<10	<20	<10	<20
	102	68	67	46	38	12	<20	<10	<20
	103	97	100	124	119	71	78	12	<20

TABLE 4 Continued
LEGION MEMORIAL GOLF COURSE PRE-REMEDIAL SAMPLE RESULTS

Sample Location	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Lake 15	150	12	32	2.3	8.5	<10	<20	10	<20
	151	13	35	7	15	<10	<20	<10	<20
	152	11	22	4.7	9	<10	<20	<10	<20
	153	12	34	16	42	<10	<20	<10	<20
	154	13	31	3.3	9.3	<10	<20	<10	<20
Lake 5	155	29	56	21	31	<10	<20	17	<20
	156	4.4	32	12	58	12	<20	<10	<20
	157	12	28	13	22	<10	<20	10	<20
	158	21	41	27	44	17	43	<10	<20
	159	6.7	13	2.9	4.1	<10	<20	<10	<20
Lake 6	160	25	35	5.3	7.5	<10	<20	15	<20
	161	61	60	30	22	<10	<20	<10	<20
	162	49	72	48	41	15	<20	<10	<20
	163	66	89	18	31	<10	<20	<10	<20
	164	39	41	25	26	13	<20	<10	<20
Clubhouse Sidewalk	502	29	52						
	503			46	49				
New Footing by Clubhouse	504	101	61						
	505			64	<20				
	506					<18	<20		

TABLE 5
EAST MARINE VIEW DRIVE
AIR MONITORING RESULTS

	PERSONAL AIR MONITORING[1]			PERIPHERAL AIR MONITORING[2]			
	Sample 1			Sample 1		Sample 2	
DATE	Arsenic (ug/m^3)	Lead (ug/m^3)	Sample ID	Arsenic (ug/m^3)	Sample ID	Arsenic (ug/m^3)	Sample ID
9/3/97	0.08	0.44	MVD-01	<0.078	MVD-02	<0.078	MVD-03
9/10/97	0.08	3.5	MVD-06	<0.08	MVD-04	<0.08	MVD-05
5/4/98	<0.08	0.87	700-05-03	<0.08	700-05-01	<0.08	700-05-02

Note 1: PEL's for personnel monitoring are 10 ug/m^3 for arsenic and 50 ug/m3 for lead.

Note 2: The trigger level for peripheral monitoring is 0.2 ug/m^3 for arsenic.

TABLE 6
LEGION MEMORIAL GOLF COURSE
AIR MONITORING RESULTS

	PERSONAL AIR MONITORING[1]			PERIPHERAL AIR MONITORING[2]	
Date	Arsenic (ug/m^3)	Lead (ug/m^3)	Sample ID	Arsenic (ug/m^3)	Sample ID
6/13/97	<3.4	<3.4	729-06-02	<0.15	729-06-01
6/16/97	*	*		<0.07	729-06-03
6/27/97	<0.35	<0.35	LMGC-01	<0.08	LMGC-02
7/2/97	<0.32	<0.32	LMGC-03	<0.08	LMGC-04
7/11/97	*	*		<0.086	LMGC-05
7/19/97	<0.38	<0.38	LMGC-07	<0.08	LMGC-06
7/24/97	<0.32	<0.32	LMGC-09	<0.067	LMGC-08
7/31/97	<0.30	<0.30	LMGC-11	<0.063	LMGC-10
8/7/97	<0.3	<0.3	LMGC-13	<0.08	LMGC-12
8/14/97	<0.4	<0.4	LMGC-15	<0.08	LMGC-14
8/21/97	<0.36	<0.36	LMGC-17	0.14	LMGC-16
8/28/97	<0.4	<0.4	LMGC-19	<0.08	LMGC-18
9/4/97	<0.35	<0.35	LMGC-21	<0.07	LMGC-20

Note 1: PEL's for personnel monitoring are 10 ug/m^3 for arsenic and 50 ug/m3 for lead.

Note 2: The trigger level for peripheral monitoring is 0.2 ug/m^3 for arsenic.

Note *: Sampler Malfunction

TABLE 7
EAST MARINE VIEW DRIVE STOCKPILE SAMPLE RESULTS
(First Round)

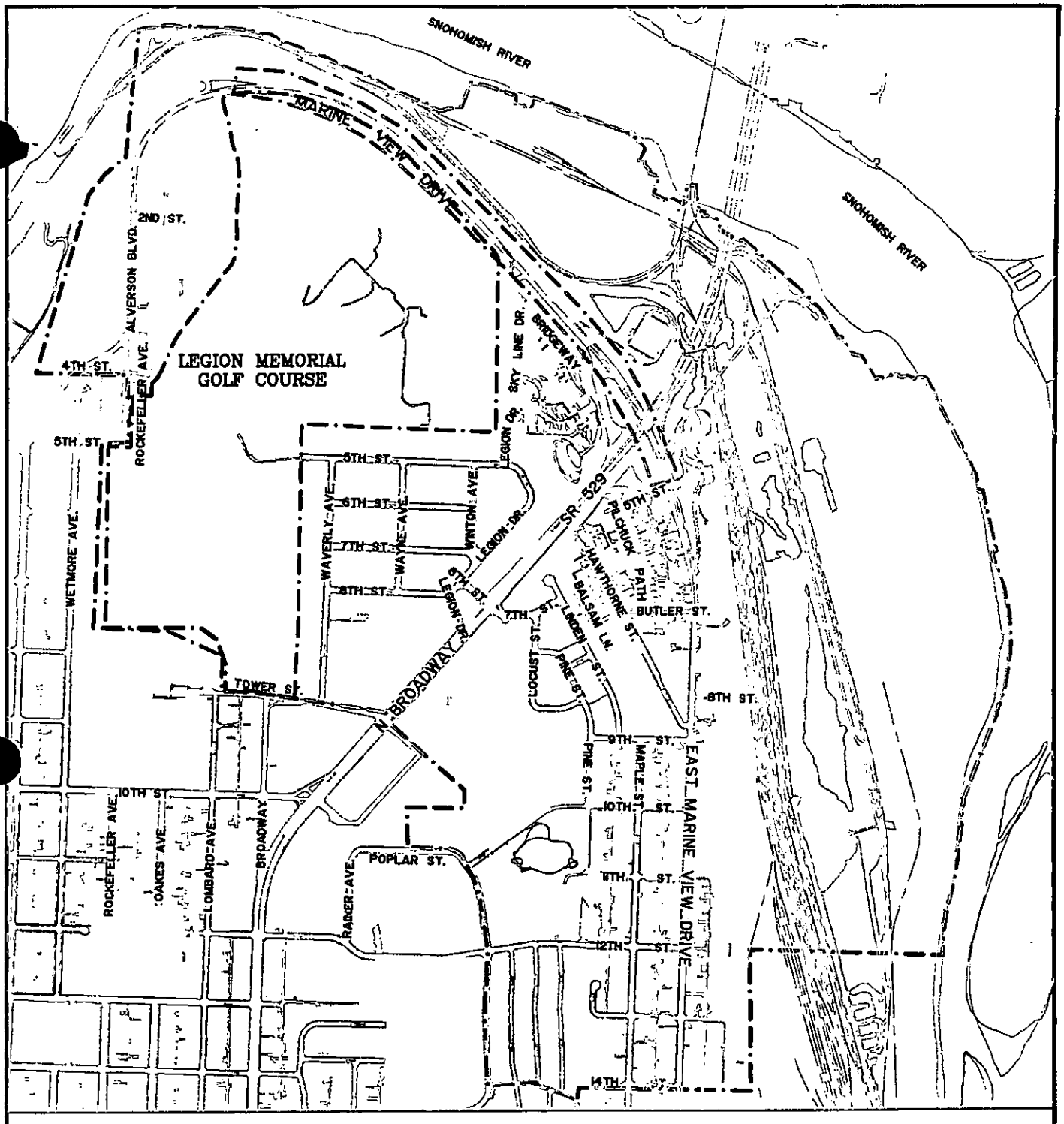
Sample Location	Sample Number	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Topsoil Stockpile	OSP-2	43	49
Topsoil Stockpile	OSP-3	48	43
Topsoil Stockpile	OSP-4	36	72
Topsoil Stockpile	OSP-5	87	130
First Windrow of Till (west side)	EVT-9806-100	5	
Second Windrow of Till	EVT-9806-101	4	
Third Windrow of Till	EVT-9806-102	12	
Fourth Windrow of Till	EVT-9806-103	19	
Fifth Windrow of Till	EVT-9806-104	10	
Sixth Windrow of Till (east side)	EVT-9806-105	66	

TABLE 8
EAST MARINE VIEW DRIVE STOCKPILE SAMPLE RESULTS
(Second Round)

Sample Location	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Sixth Windrow (subunit 1 - south end)	EVT-9806-106 to EVT-9806-108	12	12	12	15	16	26
Sixth Windrow (subunit 2 - to north)	EVT-9806-109 to EVT-9806-111	12	19	10	15	12	20
Sixth Windrow (subunit 3 - to north)	EVT-9806-112 to EVT-9806-114	15	24	17	20	17	28
Sixth Windrow (subunit 4 - north end)	EVT-9806-115 to EVT-9806-118	65	120	13	15	9	13

TABLES

FIGURES



LEGEND

- CURRENT EVERETT STUDY AREA BOUNDARY
- EAST MARINE VIEW DRIVE WIDENING PROJECT AREA
- LEGION MEMORIAL GOLF COURSE PROJECT AREA

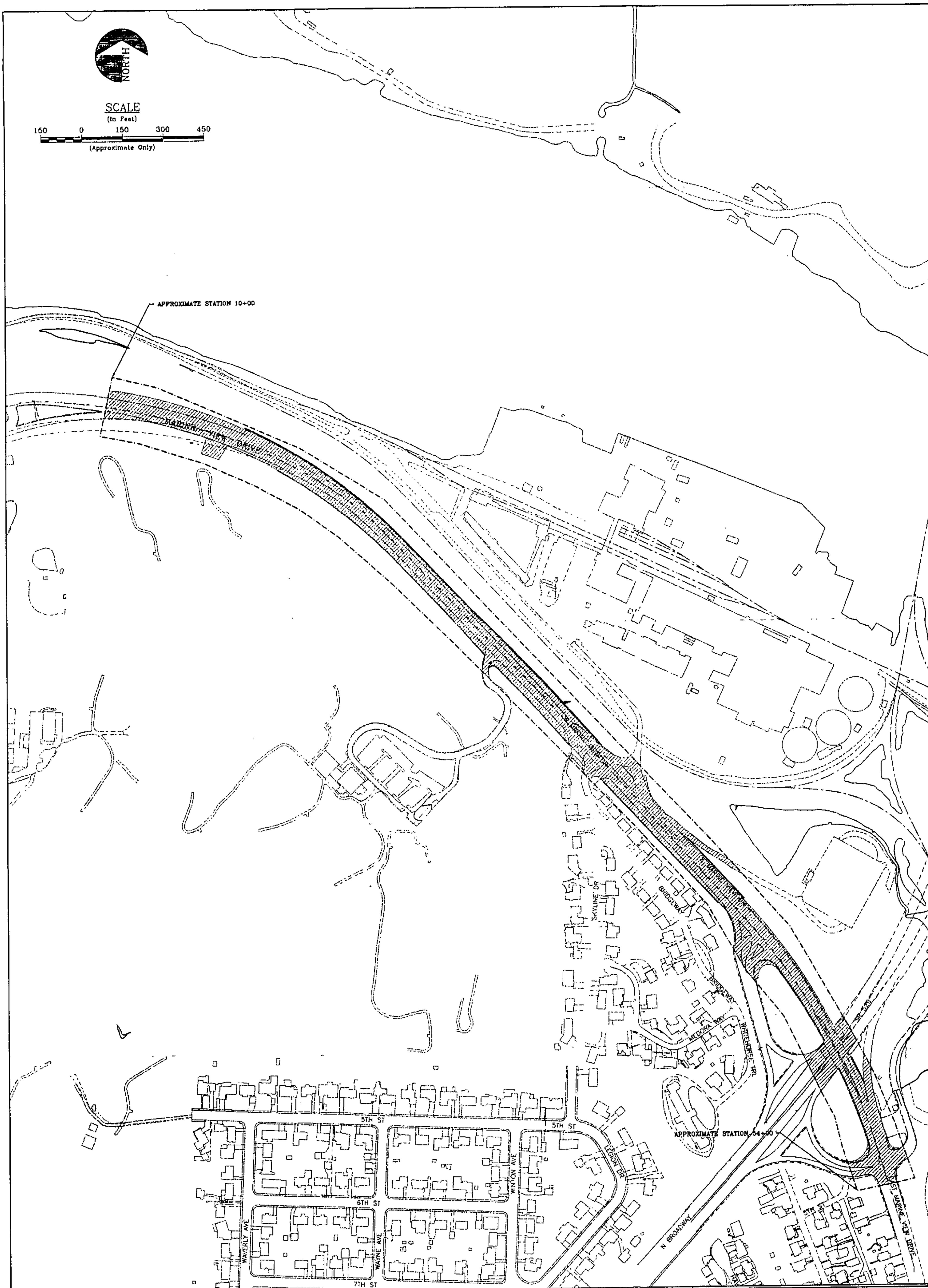
NORTH

SCALE (In Feet) 0 100

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS	**SITE LOCATION MAP**	FIGURE 1

UPDATE TIME: 10:40AM
000\0700\065\0083\TAC\111998\I:\STORAGE\70098T01.DWG

Hydrometrics, Inc. Consulting Scientists, Engineers and Contractors



LEGEND

EAST MARINE VIEW DRIVE WIDENING PROJECT BOUNDARY AND PAVED, CAPPED, OR LANDSCAPED AREA

RETAINING WALL

ROCK WALL

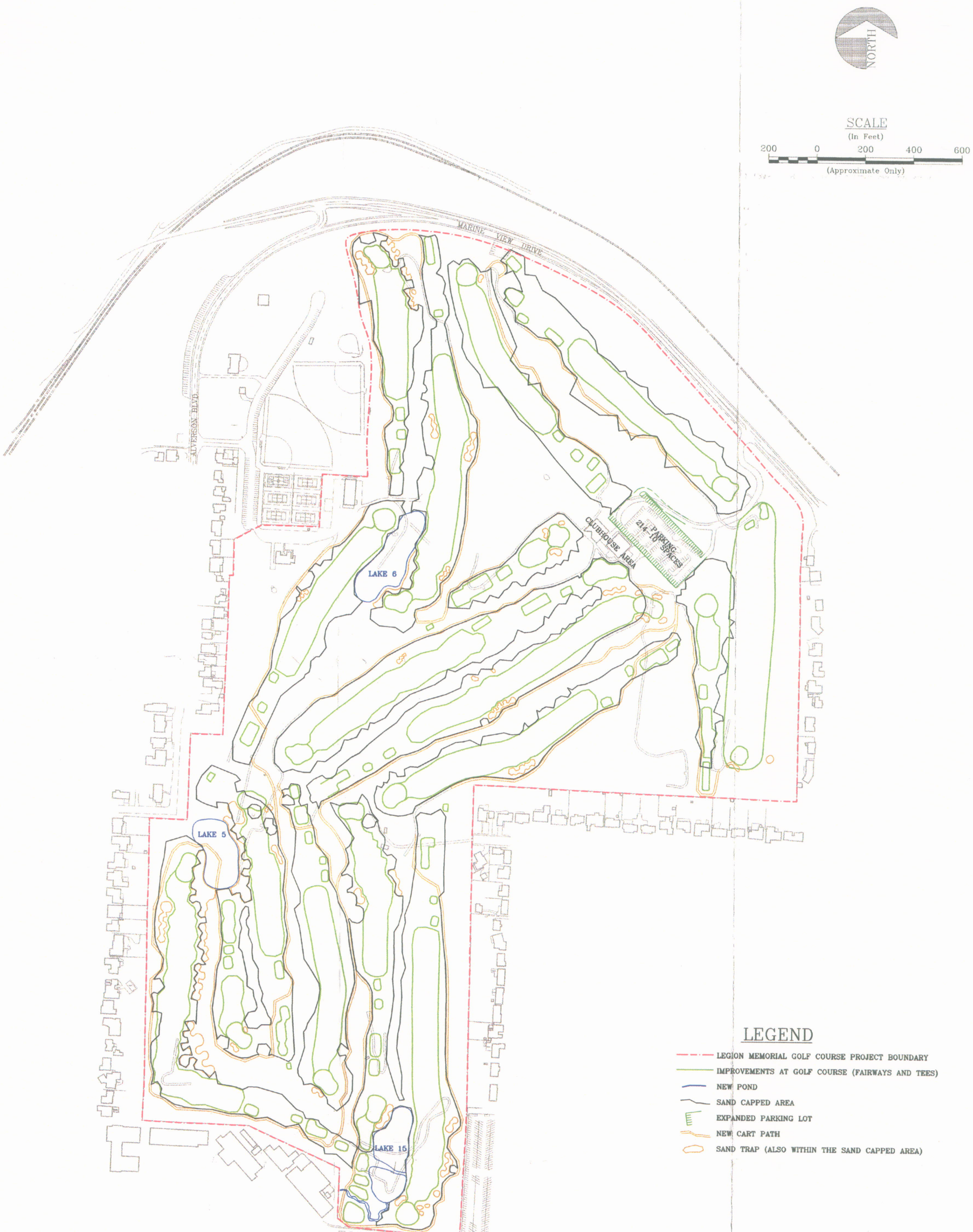
PAVED AREA

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS EVERETT, WASHINGTON

EAST MARINE VIEW DRIVE
AS-BUILT SITE DIAGRAM

Hydrometrics, Inc.
Consulting Scientists, Engineers, and Contractors
Ruston, Washington

FIGURE 2

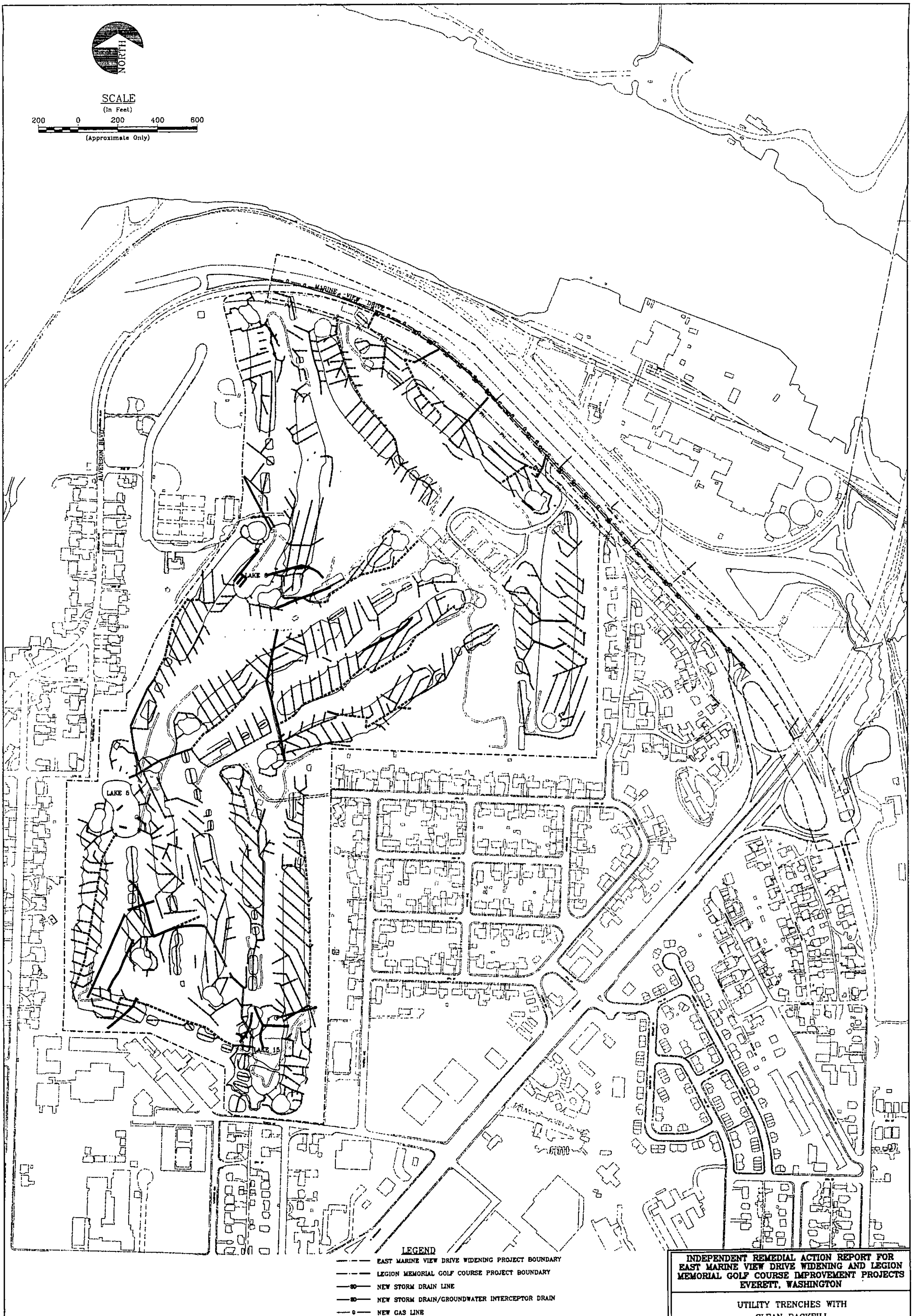


INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS EVERETT, WASHINGTON

LEGION MEMORIAL GOLF COURSE
AS-BUILT SITE DIAGRAM

Hydrometrics, Inc.
Consulting Scientists, Engineers, and Contractors
Ruston, Washington
5219 N. Shirley St., Suite 100 (253) 752-1470

FIGURE
3



LEGEND

- EAST MARINE VIEW DRIVE WIDENING PROJECT BOUNDARY
- LEGION MEMORIAL GOLF COURSE PROJECT BOUNDARY
- NEW STORM DRAIN LINE
- NEW STORM DRAIN/GROUNDWATER INTERCEPTOR DRAIN
- NEW GAS LINE
- DRAIN TILES
- NEW POND
- NEW PUD/GTE LINE
- PRE-CONSTRUCTION INTERCEPTOR DRAINS

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS EVERETT, WASHINGTON

UTILITY TRENCHES WITH CLEAN BACKFILL

Hydrometrics, Inc.
Consulting Scientists, Engineers, and Contractors
Ruston, Washington

FIGURE 4

NORTH

SCALE
(In Feet)
200 0 200 400 600
(Approximate Only)

LEGEND

- EAST MARINE VIEW DRIVE WIDENING PROJECT BOUNDARY
- LEGION MEMORIAL GOLF COURSE PROJECT BOUNDARY
- INDEX CONTOUR (10 FT)
- INTERMEDIATE CONTOUR (1 FT)

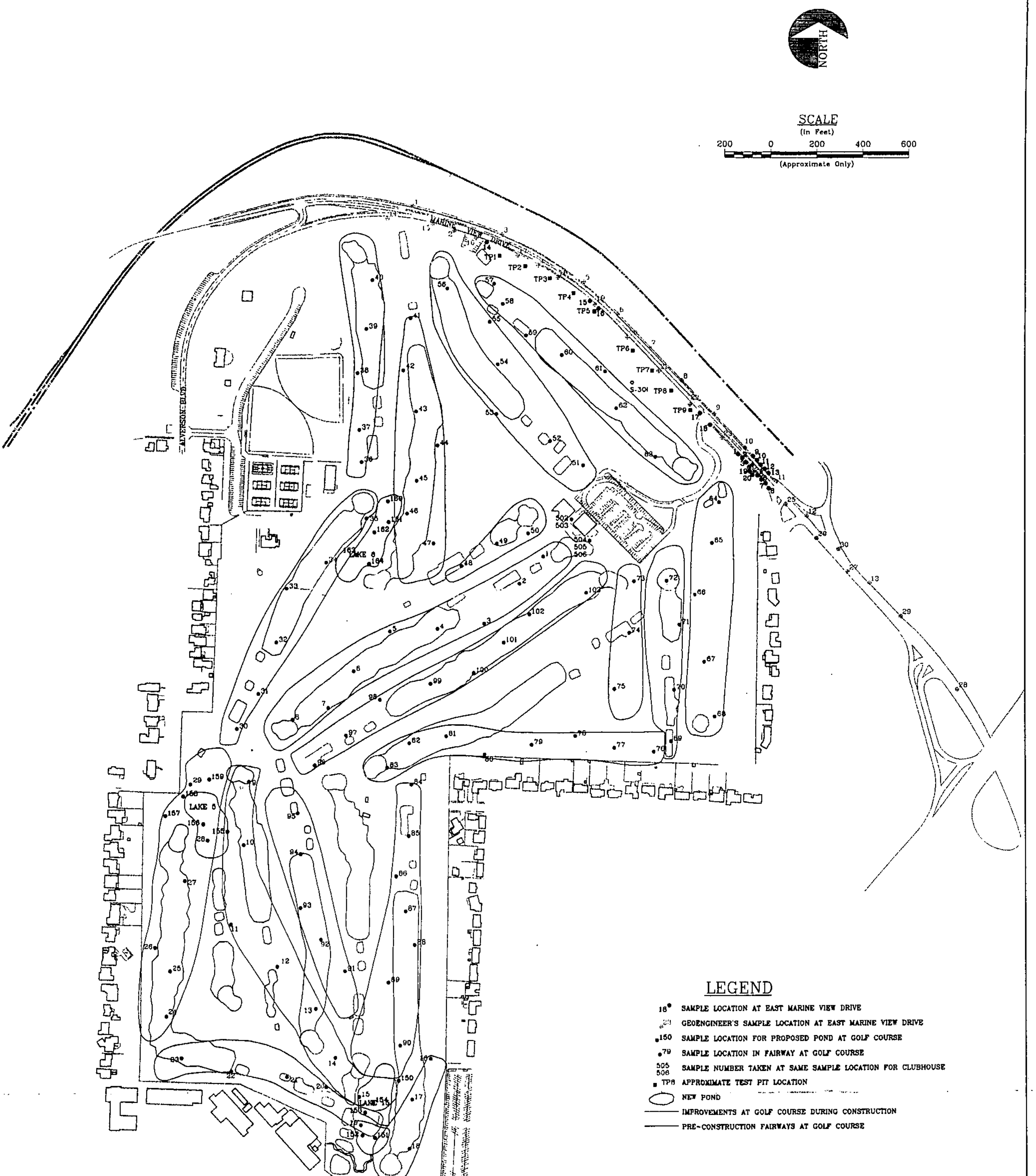
NOTE:
CONTOURS SHOW CONDITIONS BEFORE CONSTRUCTION.

INDEPENDENT REMEDIAL ACTION REPORT FOR
EAST MARINE VIEW DRIVE WIDENING AND LEGION
MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS
EVERETT, WASHINGTON

SURFACE TOPOGRAPHY

Hydrometrics, Inc.
Consulting Scientists, Engineers, and Contractors
Ruston, Washington
(253) 756-1479

FIGURE
5


NORTH
SCALE
(In Feet)
200 0 200 400 600
(Approximate Only)
MARINE VIEW DRIVE
ALVERSON BLVD
LAKE 6
LAKE 5
LAKE 15
LEGEND
18 SAMPLE LOCATION AT EAST MARINE VIEW DRIVE
GEOENGINEER'S SAMPLE LOCATION AT EAST MARINE VIEW DRIVE
150 SAMPLE LOCATION FOR PROPOSED POND AT GOLF COURSE
79 SAMPLE LOCATION IN FAIRWAY AT GOLF COURSE
505 506 SAMPLE NUMBER TAKEN AT SAME SAMPLE LOCATION FOR CLUBHOUSE
TP8 APPROXIMATE TEST PIT LOCATION
NEW POND
IMPROVEMENTS AT GOLF COURSE DURING CONSTRUCTION
PRE-CONSTRUCTION FAIRWAYS AT GOLF COURSE

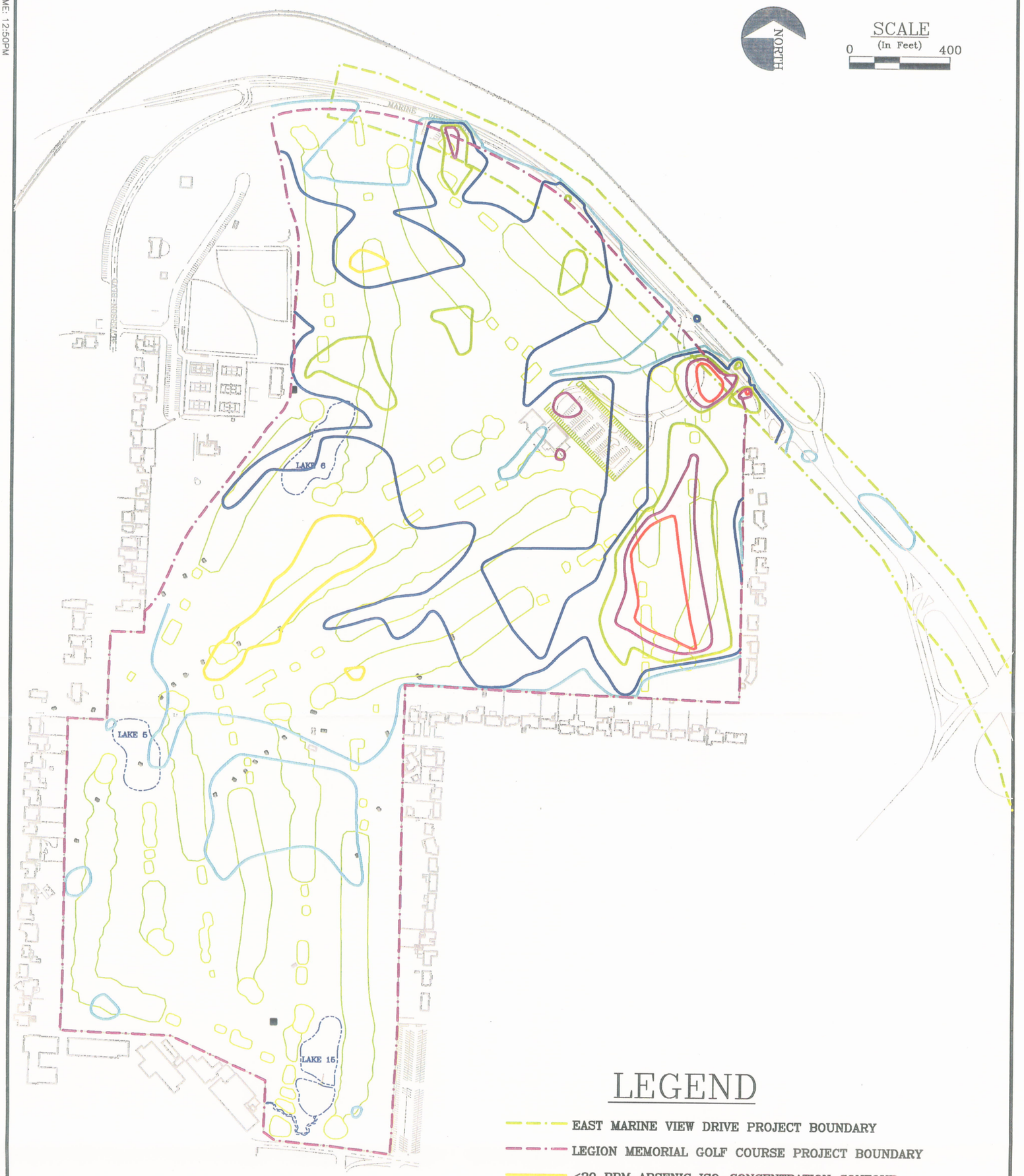
INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS EVERETT, WASHINGTON

PRE-REMEDIAL SAMPLING LOCATIONS BASED ON PRE-REMEDIAL SAMPLING

Hydrometrics, Inc.
Consulting Scientists, Engineers, and Contractors
Ruston, Washington

FIGURE 6

UPDATE TIME: 3:25PM



LEGEND

- EAST MARINE VIEW DRIVE PROJECT BOUNDARY
- LEGION MEMORIAL GOLF COURSE PROJECT BOUNDARY
- <20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >50 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >100 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >150 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >200 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- NEW FAIRWAYS

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS	**ARSENIC ISOCONTOURS OF 0-6 INCHES BASED ON PRE-REMEDIAL SAMPLING**	**FIGURE** 7

LEGEND

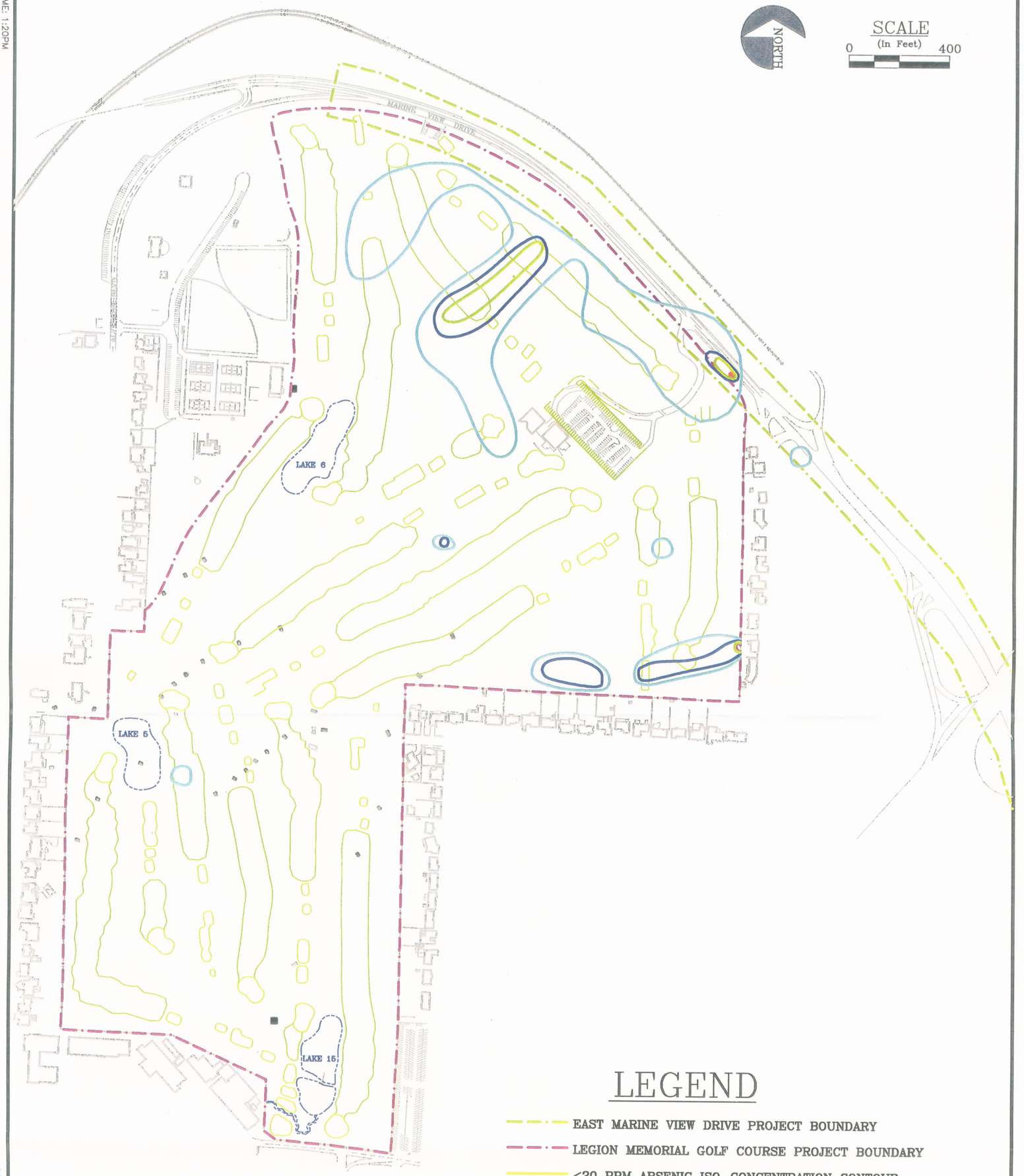
- EAST MARINE VIEW DRIVE PROJECT BOUNDARY
- LEGION MEMORIAL GOLF COURSE PROJECT BOUNDARY
- <20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >50 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >100 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >150 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >200 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- NEW FAIRWAYS

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS	**ARSENIC ISOCONTOURS OF 6-12 INCHES BASED ON PRE-REMEDIAL SAMPLING**	FIGURE 8

LEGEND

- EAST MARINE VIEW DRIVE PROJECT BOUNDARY
- LEGION MEMORIAL GOLF COURSE PROJECT BOUNDARY
- <20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >50 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >100 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >150 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >200 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- NEW FAIRWAYS

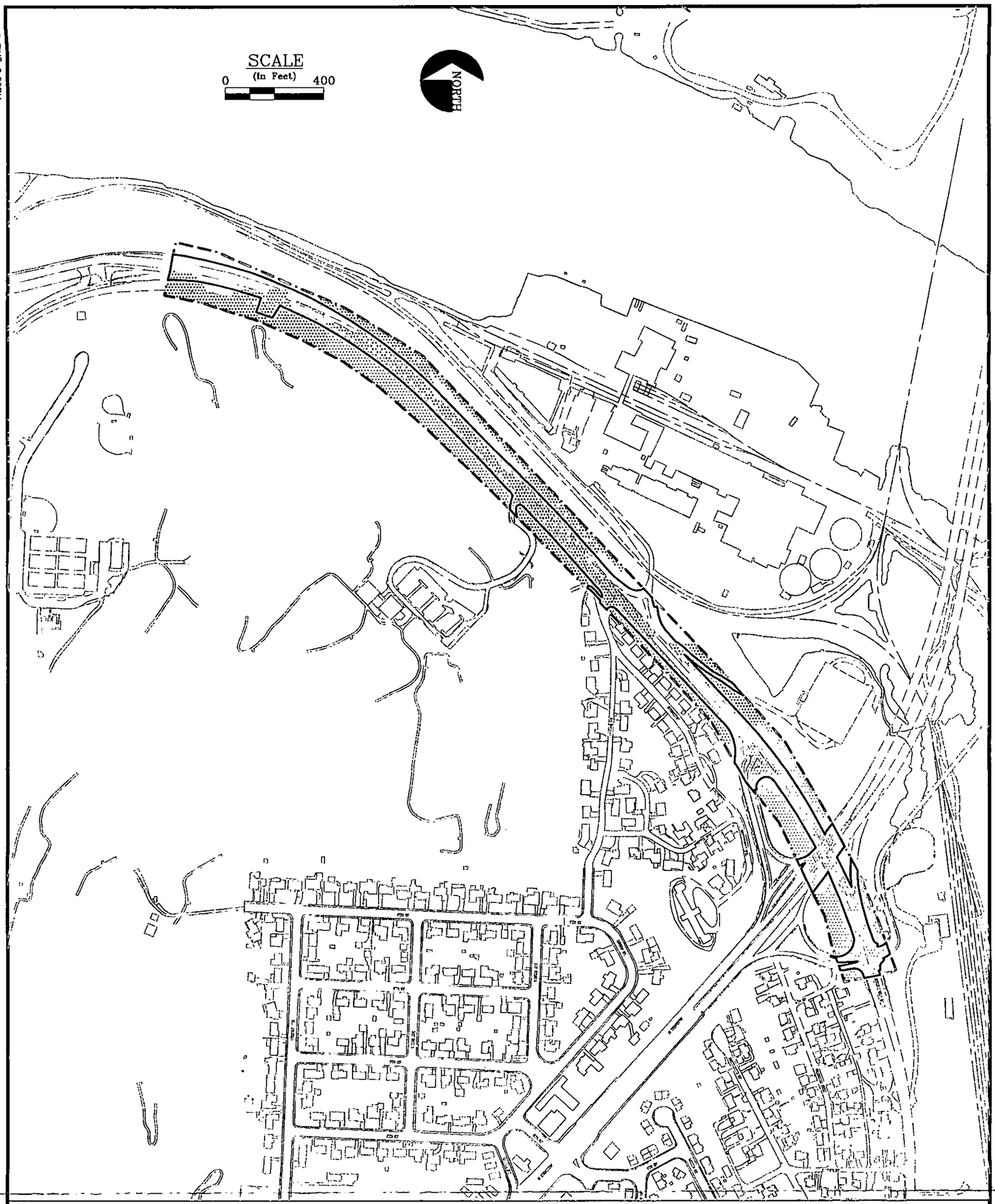
INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS	**ARSENIC ISOCONTOURS OF 12-18 INCHES BASED ON PRE-REMEDIAL SAMPLING**	FIGURE 9



LEGEND

- EAST MARINE VIEW DRIVE PROJECT BOUNDARY
- LEGION MEMORIAL GOLF COURSE PROJECT BOUNDARY
- <20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >20 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >50 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >100 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >150 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- >200 PPM ARSENIC ISO-CONCENTRATION CONTOUR
- NEW FAIRWAYS

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS	**ARSENIC ISOCONTOURS OF >18 INCHES BASED ON PRE-REMEDIAL SAMPLING**	FIGURE 10



LEGEND

- EAST MARINE VIEW DRIVE WIDENING PROJECT BOUNDARY AND PAVED, CAPPED, OR LANDSCAPED AREA
- PAVED AREA
- AREA EXCAVATED TO BELOW CLEAN TILL
- AREA WHERE ARSENIC CONCENTRATION IS >20 PPM
- AREA NOT SAMPLED (NO SIGNIFICANT EXCAVATION OCCURRED, BENEATH PRIOR ROADWAY AND CLOVERLEAFS)
- AREA WHERE ARSENIC CONCENTRATION IS >20 PPM (BACKFILLED WITH SOIL FROM THE SOUTH SIDE)

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS	**AREA OF RESIDUAL CONTAMINATION FOR EAST MARINE VIEW DRIVE**	FIGURE 11

UPDATE TIME: 120498
0000\0700\065\0083\TAC\11:30AM\:\STORAGE\70098T12.DWG

NORTH

SCALE
(In Feet)
0 400

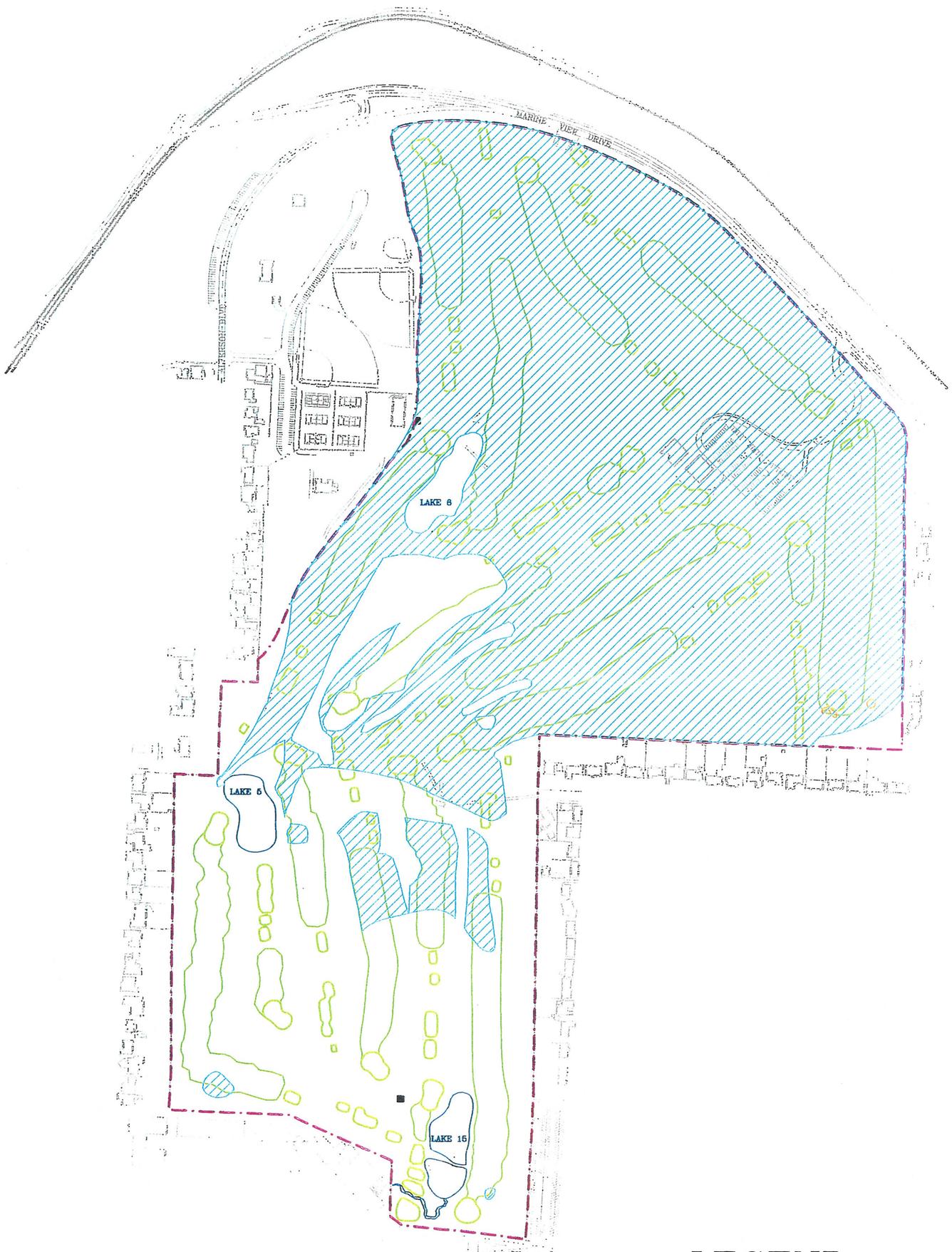
LEGEND

- PROJECT BOUNDARY
- AREA OF RESIDUAL CONTAMINATION (>20PPM)
- AREA NOT ON GOLF COURSE HOLES (>20PPM)
- AREA WITH SUBSTANTIAL STRUCTURES OR IMPERVIOUS SURFACE (>20PPM)
- AREA OF OLD ESTABLISHED VEGETATION (LARGE TREES, ETC.)

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMEORIAL GOLF COURSE IMPROVEMENT PROJECTS	**AREA OF RESIDUAL CONTAMINATION FOR LEGION MEMORIAL GOLF COURSE (>20 PPM FOR 0-6 INCHES)**	FIGURE 12

NORTH

SCALE
0 (In Feet) 400

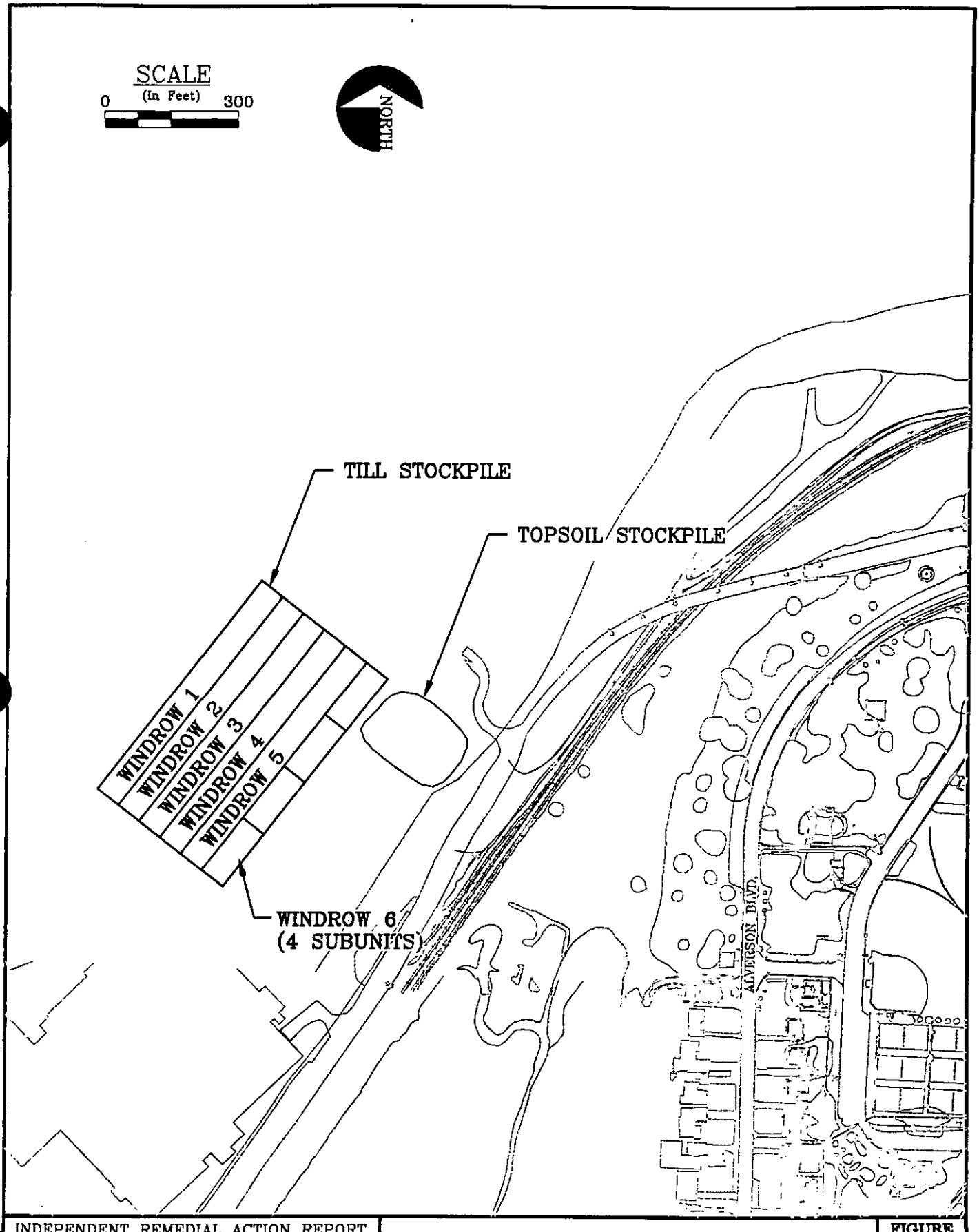


LEGEND

PROJECT BOUNDARY

AREA OF RESIDUAL CONTAMINATION (>20PPM)

INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMEORIAL GOLF COURSE IMPROVEMENT PROJECTS	**AREA OF RESIDUAL CONTAMINATION FOR LEGION MEMORIAL GOLF COURSE (>20 PPM FOR >6 INCH DEPTH)**	FIGURE 13



INDEPENDENT REMEDIAL ACTION REPORT FOR EAST MARINE VIEW DRIVE WIDENING AND LEGION MEMORIAL GOLF COURSE IMPROVEMENT PROJECTS

STOCKPILE SAMPLING LOCATIONS AT PORT OF EVERETT'S BAYWOOD SITE

FIGURE 14

UPDATE TIME: 12:00PM
000\0700\065\0083\TAC\120298\I:\STORAGE\70098T13.dwg

Hydrometrics, Inc. Consulting Scientists, Engineers and Contractors

APPENDIX A
SITE SUMMARY FORM

Voluntary Cleanup Program

Washington State - Department of Ecology - Toxics Cleanup Program

Site Summary

This Summary is a required component of your request for assistance under the Voluntary Cleanup Program

Which of the following apply?

[ ] Requesting assistance on a planned cleanup

[X] Requesting assistance on an ongoing cleanup.

Requesting review of a completed cleanup.

Note: If you submitted your Request for Assistance (ECY 020-74) previously without a Site Summary (this form) or this is a revised Site Summary, Please provide this completed form to Ecology at least five (5) working days prior to the meeting/site visit/documentation review (whichever comes first).

A) Site Identification:

Name of Site: East Marine View Drive and Legion Memorial Golf Course

Alternate Name(s) for Site: N/A

Street Address of Site: East Marine View Drive to Alverson and 144 West Marine View Drive

City: Everett State: WA Zip: 98201

County: Snohomish UBI Number: none

Mailing Address (if different from above): Public Works Department, 3200 Cedar Street

City: Everett State: WA Zip: 98201

Township 29 N Range 5 E Section 8 Quarter-Quarter NW, SW, and SE

If Known:

Latitude: Degree Minute Second

Longitude: Degree Minute Second

Method used to calculate Latitude and Longitude:

How large (in acres) is the site? Legion Memorial Golf Course is approximately 145 acres and East Marine View Drive is approximately 5 acres.

Please attach two maps to this form. (See attached Independent Remedial Action Report)

1) An area map, showing general location of the site in relation to surrounding bodies of water, cities, highways, and streets. (Please mark site location.)

2) A site diagram showing surrounding cross-streets, labeled building outlines, sampling and well locations, etc.

B) Person/Organization Making Request for Assistance/Review:

Name: Dave Davis/Jay Magill

Firm: City of Everett Public Works and Parks and Recreation Departments

Street Address: 3200 Cedar Street

City: Everett State: WA Zip: 98201

Telephone Number: 425-257-8800 / 425-257-8300 Extension:

Fax Number: 425-259-8856 / 425-257-6805 e-mail address: ddavis@ci.everett.wa.us / jmagill@ci.everett.wa.us

Which best describes your involvement with the site? (Check as many as apply.)

Current Owner	X	Former Owner	☐	Potential Purchaser	☐
Current Operator	X	Former Operator	☐	Other (specify)	☐
Environmental Consultant		for			
Attorney		for			
Insurance Carrier		for			
Other (specify)		for			

C) Release Information:

Date of Release (if known): Date of Discovery: (See Everett Smelter Site Remedial Investigation, Hydrometrics, 1995)

Drinking Water: Number of Drinking Water Supply Wells within 1/2 mile 0

Are there any drinking water systems affected? ☐ yes X no

If yes, has alternate drinking water been provided? ☐ yes ☐ no

If Drinking Water systems are affected, are the systems public, private, or both?

Aquatics: Are there an creeks, streams, ponds, wetlands, or shorelands...

on or adjacent to the site? X yes ☐ no

Within 1/4 mile of the site? X yes ☐ no

Where are they located? Snohomish River to the north of the site and 3 small drainage ponds at the golf course.

Are they impacted by contamination from the site? ☐ yes ? X no (Ecology is conducting supplemental RI work in the lowland area)

General Hazardous Substance Categories: Please complete the chart below. List the contaminants known or suspected at the site prior to cleanup, and mark the appropriate medium (i.e. soil) with: **C** (confirmed and above MTCA); **B** (confirmed but below MTCA); **S** (suspected); N/A (not-applicable); **O** (tested and not present); or **U** (unknown).

Contaminant	**Class *(for office Use***	**Affected Soil**	**Media: Ground-Water**	**Surface Water**	**Air**	**Sediment**	**Date of Release *(if known)***
Example: Lead		C	O	S	U	S	1967-82
1) Arsenic		C	NA	O	NA	NA	
2) Lead		C	NA	O	NA	NA	
3)							
4)							
5)							
6)							

D) Report Information of Assessment or Remediation Work Done to Date

Assessment:

Has site assessment work been done at this site? yes ? X no ☐ In-progress ☐

If yes, when? 1995-1996 Were results reported to Ecology? yes X no ☐ Date July 1996 and January 1997

Describe: (list reports in "E" below)

July 1996 is the Independent Remedial Action Plan for East Marine View Drive and January 1997 is the Independent Remedial Action Plan for Legion Memorial Golf Course. In addition, Ecology received SEPA documents addressing the remedial actions (January and February, 1997) and exchanged correspondence with the City of Everett on the work (see Appendices B and F of the independent remedial action report).

Remediation:

Has any site cleanup work been done at the site? yes X no ☐ in-progress ☐
If yes, please continue to answer the remaining questions in this section to the best of your ability.

When was the cleanup work done? 1997-1998
Were results reported to Ecology? yes x no date December, 1998
Describe: (list reports in "E" below)

Results of the cleanup work are contained within the attached Independent Remedial Action Report dated December 1998.

Does contamination remain on-site after cleanup activities? yes X no ☐
If yes, describe: (list reports in "E" below)

See attached Independent Remedial Action Report dated December, 1998. Basically, both projects have contained soils with contaminant concentrations above MTCA Method A residential soil cleanup levels. However, neither site is residential.

For each contaminant listed in ***Part C) Release Information (above)***, please describe the quantity of the contaminant (in pounds) which was removed or treated as a result of the cleanup activities:

This section is not applicable because the main remedial action consisted of soil reuse and capping the sites. Soil removal and disposal is addressed on the next page of this form.

Contaminant	**Class** ***(for office Use***	**Pounds of Contaminant:** **Incinerated** **Washed**		**Removed**	**Treated**	***Contained)***
Example: Lead		10	20	40	10	60
1)						
2)						
3)						
4)						
5)						
6)						
7)						
8)						
9)						
10)						
11)						
12)						

As a result of the cleanup:
How many acres of land were returned to ***unrestricted*** use? none
How many acres of land were returned to ***restricted*** use? Entire site has institutional controls and the golf course has a deed restriction.
How many cubic feet of contaminated soil was remediated or contained? NA
How many gallons of contaminated soil was remediated or contained? NA
How many people are now at reduced risk as a result of the cleanup action? All that use the site.
How many pounds of potential pollution was prevented as a result of the cleanup action? NA

Methods/Treatments Used	Soil	Groundwater	Surface Water	Drinking Water	Air	Wastes
Method A	X					
Method B						
Method C						
Have these levels been met through the site ? Y or N						
Destruction or Detoxification						
Carbon Adsorption[1]	N/A					N/A
Biological Treatment					N/A	
Chemical Destruction						
Incineration		N/A	N/A	N/A		
[1]*Carbon followed by regeneration: use of granular activated carbon followed by landfilling would be classified in these tables as volume reduction and off-site landfill*						
Media Transfer						
Air stripping/Air Sparging	N/A					N/A
Aeration/Vapor Extraction		N/A	N/A	N/A	N/A	
Thermal Desorption		N/A	N/A	N/A		N/A
Immobilization						
Vitrification		N/A	N/A	N/A		
Solidification/Stabilization		N/A	N/A	N/A		
Reuse/Recycling[2]						
Specify						
[2]*For example, reuse of free petroleum product recovered in a pump and treat system.*						
Separation/Volume Reduction						
Solvent Extraction		N/A	N/A	N/A		
Soil Washington		N/A	N/A	N/A		
Physical Separation[3]						
[3]*For example, oil/water separators.*						
Land Disposal/Containment						
Containment or On-site Landfill (containment)	X		N/A			
Off-site Landfill (approximately 1,650 cubic yards from East Marine View Drive)	X	N/A	N/A	N/A		
Institutional Controls						
Specify: Legion Memorial Golf Course - deed restriction, periodic topdressing to fairway 12, and implementation of protective measures for golf course crews. East Marine View Drive - city right-of-way permit system.	X					
Others						
Specify Treatment Method						

E) Documentation:

Please list titles of all site reports below. Include name of consulting firm and year completed. (If there is not enough room for the entire list, please attach additional page(s) as necessary.)

Title:	By:	Date
Everett Smelter Site Remedial Investigation	Hydrometrics	September 1995
Geotechnical Engineering Services	GeoEngineers	December 1995
Environmental Sampling and Chemical Analytical Testing	GeoEnginners	February 1996
Independent Remedial Action Plan for East Marine View Drive	Hydrometrics	July 1996
Independent Remedial Action Plan for Legion Memorial Golf Course	Hydrometrics	January 1997
Independent Remedial Action Report for East Marine View Drive and Legion Memorial Golf Course	Hydrometrics	December 1998

Is additional information concerning the contaminants treated or removed, or cleanup or remediation methods used available in a data base? yes X no ☐ If yes, what programming software is use? Word and Excel
Is a copy included for our use? yes ☐ no X

F) Property Type: Commercial ☐ Industrial X Residential ☐ Other X (Please specify)
East Marine View Drive is Industrial, while Legion Memorial Golf Course is Park
Property currently being used? yes X no ☐
Plans for change in use? yes ☐ no X If yes, please specify:

G) Standard Industrial Classification (SIC) Codes:

List all that apply. If none apply, or if you don't know your SIC code, list activities conducted at the site (i.e. automotive repair and maintenance, construction equipment storage, etc.). An SIC code is not applicable for either site. Legion Memorial Golf Course is a park and used by the public for recreation. East Marine View Drive is a public roadway.

H) Dangerous Waste Facilities:

Does the facility have a dangerous waste identification number? yes ☐ no X
If yes, what is the number? WAD

I) Tank Information:

Complete this table for ALL tanks, whether underground (UST) or aboveground (AST), including unregulated tanks.
(*Unleaded, leaded diesel, bunker-C, waste oil, heating oil, aviation fuel, other (identify))
(** Tank status: Left in Place, Removed, Closed in Place)

Tank ID	AST/UST	Size	Was Free Product encountered? *Product	On GW	In Excavation	**Tank Status

J) Owner/Operator History
(Please photocopy and attach copies if additional owners and/or operators are known.)

Type (code) of Owner/Operator (for below):
Private **(1)** Municipal **(2)** County **(3)** Federal **(4)** State **(5)** Tribal **(6)** Mixed **(7)** Other **(8)** Unknown **(9)**
Public Entitle Acquisition via Bankruptcy **(11)**

1) Current Site Owner:	City of Everett Public Works and Parks and Recreation Departments		Type:	2
Street Address:	East Marine View Drive to Alverson and 144 West Marine View Drive			
City:	Everett	State: WA	ZIP:	98201
Contact Persons (if different than owner, above):	Dave Davis and Jay Magill			
Street Address:	3200 Cedar Street			
City:	Everett	State: WA	ZIP:	98201
Telephone Number:	425-257-8800 and 425-257-8300	Extension:		
Fax:	425-259-8856 and 425-257-6805	e-mail address:		ddavis@ci.everett.wa.us and jmagill@ci.everett.wa.us
Dates of Ownership:	to			

2) Current Facility Operator:	(same as No. 1 above)		Type:
Street Address:			
City:	State:	ZIP:	
Contact Persons (if different than owner, above):			
Street Address:			
City:	State:	ZIP:	
Telephone Number:	Extension:		
Fax Number:	e-mail address:		
Dates of Operation:	to		

3) Former Site Owner:			Type:
Street Address:			
City:	State:	ZIP:	
Contact Persons (if different than owner, above):			
Street Address:			
City:	State:	ZIP:	
Telephone Number:	Extension:		
Fax Number:	e-mail address:		
Dates of Ownership:	to		

4) Former Facility Operator:			Type:
Street Address:			
City:	State:	ZIP:	
Contact Persons (if different than owner, above):			
Street Address:			
City:	State:	ZIP:	
Telephone Number:	Extension:		
Fax Number:	e-mail address:		
Dates of Operation:	to		

K) Other Involved Parties:
(Please photocopy and attach copies if additional parties are involved)

1) Environmental Consultant:	Ken Weiner		
Representing:	City of Everett		
Firm:	Preston Gates & Ellis		
Street Address:	701 5th Ave. Suite 4900		
City:	Seattle	State: WA	ZIP: 98104
Telephone Number:	206-623-7580	Extension:	
Fax Number:	206-623-7022	e-mail address:	kenw@prestongates.com

2) Environmental Consultant:	Steve Thompson		
Representing:	City of Everett		
Firm:	Hydrometrics, Inc.		
Street Address:	5219 N. Shirley, Suite 100		
City:	Ruston	State: WA	ZIP: 98407
Telephone Number:	253-752-1470	Extension: 227	
Fax Number:	253-752-7663	e-mail address:	sthompson@hydrometrics.com

3) Site Control Person if other than Owner/Operator. (This must be a person who is on-site during normal working hours and is authorized and qualified to answer questions about the site, or a person who is available during normal business hours and has knowledge about the site and the remediations.			
Name:			
Relation to site/owner/operator:			
Firm:			
Street Address:			
City:		State:	ZIP:
Telephone Number:		Extension:	
Fax Number:		e-mail address:	
Dates of involvement with site:		to:	

4) Name:			
Relation to site/owner/operator:			
Firm:			
Street Address:			
City:		State:	ZIP:
Telephone Number:		Extension:	
Fax Number:		e-mail address:	
Dates of involvement with site:		to:	

APPENDIX B
CORRESPONDENCE WITH AGENCIES

CORRESPONDENCE REGARDING SCOPE OF WORK

APR 1997

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

April 1, 1997

Mr. Jay Magill
Park Planning and Project Superintendent
Everett Parks and Recreation Department
802 Mukilteo Boulevard
Everett, WA 98203

Re: Cleanups Associated with City of Everett Projects on E. Marine View Drive and Legion Park Golf Course

Dear Mr. Magill:

Per your request, I am writing to clarify our March 6, 1997, letter regarding the City of Everett's planned construction projects on the Everett Smelter Site.

Ecology has considered these two projects as interim actions governed by WAC 173-340-430 and as independent actions governed by WAC 173-340-510(5). Under WAC 173-340-430(2)(b)(ii), an interim action that occurs before a final cleanup action is known may be performed if it will not foreclose reasonable cleanup action alternatives at the site. Ecology has determined that the two projects will not foreclose reasonable cleanup action alternatives at the site.

Under WAC 173-340-510(5), Ecology may object to an independent action if it forecloses or preempts the selection of a cleanup action. Ecology sees no reason to object to the City's two proposed independent actions pursuant to WAC 173-340-510(5).

Please keep in mind that although WAC 173-340-510(5) anticipates that the department may offer input regarding the adequacy of an independent action, the regulation specifically states that persons who perform an independent action do so at their own risk.

I hope this letter is useful to you. Please feel free to call Dave Nazy at (206) 649-7258 or me at (206) 649-7054 if you wish to discuss this issue further.

Sincerely,

Michael J. Gallagher

Michael Gallagher
Section Manager
Toxics Cleanup Program

PARKS & RECREATION
EVERETT

January 24, 1997

Mr. Michael Gallagher
Section Manager, Toxics Cleanup Program
Wa. State Dept. of Ecology - NWRO
3190-160th Ave. SE
Bellevue, WA 98008-5452

Re: Cleanups Associated with City of Everett Projects on
E. Marine View Drive and Legion Memorial Golf Course

Dear Mr. Gallagher:

The City of Everett (City) has two important public transportation and recreation projects scheduled for the 1997 construction season in the ASARCO Smelter Study area (Smelter Site). One is a road widening project on East Marine View Drive (SR 529), and the other involves rehabilitating an existing nearby public golf course.

As encouraged by Ecology, City public works and parks department staffs have coordinated their planning on these projects in order to implement independent cleanups of arsenic-contaminated soils that may be encountered during construction. We have also obtained consultant services from Hydrometrics, which is familiar with the Smelter Site, for soil sampling analysis and for assistance in the development of an independent remedial action plan for each project.

Each plan has been coordinated with your staff, and we appreciate the technical comments as we developed the plans.

The remedial actions that are planned in conjunction with these two construction projects have been designed to be consistent with the remedial actions being considered for the overall Smelter Site and to enable Ecology to review an Independent Remedial Action Program (IRAP) report and to issue a No Further Action (NFA) letter to the City upon completion of these two projects. A summary of the proposed remedial actions for both projects is provided in this letter.

By initiating these actions in the upcoming construction season, the public interest would be served in several ways. As described below, these projects and associated independent cleanup actions would improve existing environmental conditions by reducing or eliminating both the short and long term potential for exposure to arsenic-contaminated soils that currently exists on the road right-of-way and golf course. Two important recreation and transportation projects to serve the public would proceed on schedule. A cleanup of a portion of the periphery of the Smelter Site would get underway, while Ecology, the community, ASARCO, the City and other

CITY OF EVERETT • 3002 Wetmore Ave. • Everett, WA 98201 • (206) 259-0300 • Fax (206) 259-0325
Location: 802 Mukilteo Blvd.

agencies can consider the cleanup options for the former smelter and adjacent areas, which have been the focus of the ongoing remedial investigation/feasibility study (RI/FS) and cleanup action plan.

Legion Memorial Golf Course Project

Background

The existing 145-acre golf course was built in the 1920s. The City's comprehensive plan adopted under the Growth Management Act (GMA) identifies the need to repair and rehabilitate the course as an important parks, open space and recreational facility in the City and Snohomish County. The City Council has placed a high priority on the project in the City's budget and capital facilities planning, especially in light of the needs of the current and growing population in the City and south county.

As noted elsewhere in this letter, the independent cleanup actions associated with the golf course project would mitigate an existing environmental condition and would implement an interim action for a portion of the Smelter Site that would not foreclose cleanup options for the area near the Smelter or residential neighborhoods next to the Smelter.

Overview

As a result of the Smelter Site studies and supplemental studies by the City, which have previously been reported to and shared with Ecology, arsenic-contaminated soils have been identified generally within the top one-foot of soil on the golf course.

The golf course rehabilitation will involve regrading the layout, followed by capping the area with at least four inches of clean sand and then turf, which will prevent exposure by the public or wildlife to arsenic-contaminated soils. Based on conversations among our technical staffs, this approach would be protective of human health and the environment and consistent with Ecology's expectation that containment and institutional controls are appropriate for portions of sites that contain large volumes of relatively low levels of hazardous substances.

The City will implement the construction and remedial work at Legion Memorial Golf Course as summarized in Attachment 1 to this letter.

E. Marine View Drive Improvements

Background

E. Marine View Drive (SR 529) now serves as a major arterial that connects north Snohomish County with the Everett waterfront and needs to be widened from 2-to-3 lanes to 4-to-5 lanes. The City's comprehensive plan adopted under the Growth Management Act (GMA) identifies the

need to widen E. Marine View Drive to provide additional transportation capacity to the Everett waterfront and is the last transportation improvement for the U.S. Navy Homeport project at Everett (the improvement was identified as a mitigation measure in the Homeport EIS). The City Council has placed a high priority on the project in the City's 6-year street plan, 1997 budget and capital facilities planning, especially in light of the needs of the current and growing population.

In addition, the widening of E. Marine View Drive in 1997 may be valuable in being able to mitigate traffic impacts from cleanup activities in other portions of the Smelter Site, where substantial quantities of contaminated media may need to be transported to treatment or disposal facilities.

As with the golf course construction work, the independent cleanup actions associated with construction of this road improvement project would mitigate existing environmental conditions and would implement an interim action for a portion of the Smelter Site that would not foreclose cleanup options for the area near the Smelter or residential neighborhoods next to the Smelter.

Overview

As a result of geotechnical studies for the road project, which have previously been reported to and shared with Ecology, arsenic-contaminated soil has been identified under and adjacent to a portion of the existing roadway. The road improvement project requires regrading the hillside adjacent to E. Marine View Drive in order to widen the road.

Approximately 12,000 cyds of clean soil (lower than 20 ppm concentrations of arsenic based on sampling during project construction) will be taken off site for subsequent reuse. Similar to the accepted re-use by Ecology of petroleum-contaminated soils (PCS), the remaining excavated arsenic-contaminated soils will be used to construct the subgrade bed for the widened roadway. Encapsulating this material within the roadbed will prevent exposure to the public or the environment of existing contaminated soils.

The City will implement the construction and remedial work on E. Marine View Drive as summarized in Attachment 2 to this letter.

Conclusion

We consider these projects a high priority and wish to proceed based on the independent remedial action plans as submitted. In order to construct these projects in 1997, the City needs to prepare contract and construction documents in the January-February timeframe, so that bidding process can be completed in March. Construction is planned for an approximately six month time period from April to September. An IRAP report including confirmational monitoring would be submitted to Ecology next fall, after completion of construction.

With regard to interagency consultation and public notice, City staff have been consulting with agencies in addition to Ecology which may have requirements for the implementation of the cleanup plans, including the Snohomish County Health District and Washington State Department of Transportation. The environmental checklist for the golf course project, which is expected to be issued in the coming weeks, will include the independent remedial action and incorporate the cleanup plan by reference. Since the environmental review and permitting process has already been completed on the road project, we have issued a SEPA addendum to provide public notice for the remedial action associated with construction of the road project.

These projects involve substantial taxpayer dollars. As we have discussed with Ecology, it would not make sense for the public to proceed if the City were later faced with reexcavating and reconstructing these same projects. We appreciate Ecology's willingness to consider and to confirm that the approach we are planning to take makes sense and is compatible with the Smelter Site process as a whole. We understand that Ecology cannot provide final, formal approval at this time. To allow these projects to go forward, we request that the Department of Ecology respond to this letter in two ways:

1. We ask that you acknowledge our plans as being appropriate interim actions (which address this peripheral portion of the site and do not preclude cleanup options for the former smelter facilities, adjacent residential areas, or other portions of the site), which Ecology plans to formally document at a later date in its final cleanup action plan for the Smelter Site.

2. We expect to apply through the Independent Remedial Action Program for a letter of No Further Action later this year. We would also ask that you confirm that if the City implements both of the independent remedial actions as proposed in our plans (including the compliance monitoring and institutional controls noted), Ecology expects to issue a No Further Action letter to the City.

If you have any questions on the road project, please call Dave Davis at 257-8913 or with questions on the golf project, please call Jay Magill at 257-8345.

We appreciate your staff's assistance and advice in thinking through how these important civic projects can proceed in a coordinated fashion with the ongoing Smelter Site MTCA process. Given the schedule outlined above, we would very much appreciate a response within the next two weeks. Thank you for considering this matter.

Sincerely,

Dave Davis, P.E.
City Engineer

Jay N. Magill, P.E.
Park Planning and Project Superintendent

cc: Mike Rundlett, Ecology
Dave Nazy, Ecology
Edward D. Hansen, Mayor
Bob Cooper, City Parks Director
Larry Crawford, City Public Works Director
Paul Roberts, City Planning Director
Jim Iles, City Attorney's Office
Ken Weiner, Preston Gates & Ellis

Attachment 1

Specific Construction and Remedial Activities for Legion Memorial Golf Course Rehabilitation Project

The City will implement the construction and remedial work at Legion Memorial Golf Course as follows.

The general scope of work calls for the realignment, regrading, and drainage improvements to all 18 fairways. Soil will be relocated on the site but none will be transported off site.

Fairway regrading will include over-capping with sand of four inch minimum depth, potentially greater in some areas, and the installation of drainage tile to capture surface water infiltration.

The drain tile will be routed to collector lines and into retention ponds. All water collected by the drain tile system will flow into the City sewer system and secondary waste water treatment plant. Retention ponds will have water sampled for arsenic on an annual basis.

Any trees, shrubs, and bushes that are removed from their current locations as a result of the work will be cleaned of clinging soil to the extent practical and either: (1) relocated on site; (2) chipped or composted and recycled for reuse on site; or (3) if reuse is not practicable, tested for arsenic prior to proper disposal by the contractor at a permitted facility.

Utility trenches will be backfilled with clean imported material where practical in those areas that have arsenic concentrations above 20 ppm. Trenches backfilled with clean material will be noted on as-built drawings. This will allow future maintenance work on facilities so that workers have minimal or no contact with original soil.

Sample locations S201 and S302 identified in the Smelter Study area will be covered with an asphalt or concrete surface during construction of parking lots.

A health and safety plan will be administered during construction. All field personnel, including subcontractors and city inspectors who may potentially come into contact (physical or airborne) with existing soils during the course of the contract shall have 24 hours of initial safety training (or equivalent in accordance with 29 CFR 1910.120) as required by WISHA under WAC 296-62-300 Part P. Management supervisors will receive an additional eight hours of training as required under the same regulations.

The golf course property will be subject to institutional controls in accordance with WAC 173-340-440 (i.e., deed restriction providing notice, preservation of cap, and provision for proper management of soils if there is future excavation or construction).

The project manager is Mr. Jay Magill, P.E., Parks Planning and Project Superintendent.

Attachment 2

Specific Construction and Remedial Activities for East Marine View Drive Improvements Project

The City will implement the construction and remedial work on East Marine View Drive as follows.

Those soils in the ROW that are currently covered with an impermeable barrier such as asphalt or concrete will not be disturbed. The construction specifications and cleanup action plan will not require the removal of such soils.

Soils on the south side of the roadway will be excavated and used as fill for the north side of the road. The contractor will be required to control dust during construction by watering the site. Soils may be temporarily stored at the Port of Everett Baywood site. While at the Port, they will be isolated from the surrounding soils with a plastic barrier. Additionally, approximately 7000 cyds of clean soil (lower than 20 ppm concentrations of arsenic based on sampling) will be permanently stockpiled at the Port's Baywood site for their future use, and approximately 5000 cyds stored at the City's landfill site for future capping material.

The entire roadway will be capped with asphalt and a concrete sidewalk. This will provide an effective barrier to human contact and to infiltration of surface water. As an additional control measure, shallow groundwater interceptor drains will be installed on the upgradient side of the ROW to intercept groundwater and prevent its contact with soils under the new or existing pavement.

Any brick or debris to be removed from the project site during construction will be disposed at a facility permitted under WAC 173-351 or Subtitle D facility. A fish bioassay has been conducted in accordance with the WAC 173-303-110(3) on a sample and results indicated that the material is not a state designated dangerous waste.

Any trees, shrubs, and bushes that are removed from their current locations as a result of the work will be cleaned of clinging soil to the extent practical, chipped or composted and recycled for reuse on site or at the golf course; or, if reuse is not practicable, tested for arsenic prior to proper disposal by the contractor at a permitted facility.

Other existing vegetative material will be stripped with a dozer rake and piled. Representative samples will be taken and if the results exceed 20 ppm arsenic concentrations, the contractor dispose of the material at a facility permitted under WAC 173-351 or Subtitle D facility. Otherwise, the material will be reused by the City or disposed of at a site selected by the contractor.

Utility trenches will be backfilled with clean imported material in those areas that have arsenic concentrations above 20 ppm. Trenches backfilled with clean material will be noted on as-built drawings. This will allow future maintenance work on facilities without causing workers to come into contact with original soil.

If Ecology determines it to be necessary, this segment of E. Marine View Drive will be subject to institutional controls in accordance with WAC 173-340-440 (i.e., deed restriction providing notice, preservation of cap, and provision for proper management of soils if there is future excavation or construction). The City already has in place an administrative program which limits and controls any digging or activity in the ROW (City of Everett ROW "Use Permits" that are administered by the Engineering and Public Services Department). The program will be coordinated with any subsequent institutional controls or requirements implemented as part of Ecology's final cleanup action plan for the whole Smelter Site.

All field personnel, including subcontractors, and city inspectors, who may potentially come into contact (physical or airborne) with existing soils during the course of this contract shall have 24 hours of initial safety training (or equivalent in accordance with 29 CFR 1910.120) as required by WISHA under WAC 296-62-300 Part P. Management supervisors shall receive an additional eight hours of training as required under the same regulations.

Soils not covered with an impervious surface within a ROW and encroached by private residences (i.e., the front yards extending to the sidewalk or curb) will not be disturbed. It is assumed that these areas will be addressed in the Smelter Site final cleanup action plan.

The project manager is Dave Davis, P.E., City Engineer.

400/034/0036/TRC/95

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

December 18, 1995

Mr. Dave Davis, P.E., City Engineer
Everett Public Works
3002 Cedar Street
Everett, Washington 98201

Dear Mr. Davis:

RE: Proposed Widening of East Marine View Drive

As we discussed in our meeting on November 20, 1995, the City of Everett (the City) is planning to widen East Marine View Drive from the interchange at Broadway and East Marine View Drive northwestward to a bridge which provides access to the Navy Base. This letter provides informal technical advice regarding matters you may wish to consider regarding grading and filling for that portion of the project on the Everett Smelter Site. As the project proponent, the City has the legal responsibility to ensure activities conducted during the widening comply with federal, state, and local regulations. You should confer with your own consultant to identify pertinent regulatory requirements and develop detailed compliance plans.

The letter first considers designation of soil as contaminated under MICA, as state-only Dangerous Waste, and as federally-designated hazardous waste. Development of a sampling plan is then briefly discussed.

Designation of soil categories

The Everett Smelter Site contains soil contaminated with arsenic in concentrations reaching 720,000 ppm arsenic. Measurements to date have been of arsenic concentrations. The arsenic is contained in the compound arsenic trioxide (As_2O_3). Arsenic trioxide is 76% arsenic by weight.

Lead is also present on site in concentrations up to 8,080 ppm.

The widening project will cross a portion of the Everett Smelter site which, based on data collected to date, is expected to contain arsenic at concentrations less than 200 ppm.

The City must identify whether arsenic or lead concentrations in the soil to be excavated are such that the soil is federally-designated hazardous waste or state-only dangerous waste. In addition, soil arsenic concentrations in excess of 7 ppm and soil lead concentrations in excess of 250 ppm exceed MTCA regulatory criteria. Such soil is problem waste.

You should check with local landfills to identify what categories of waste they can accept. This is usually defined in their permit and is under the oversight of the local health agency. Normally, federally-designated waste must go to a RCRA Subtitle C permitted facility such as Chemical Waste Management's facility in Arlington, Oregon.

Soil which does not designate federally but which does designate as State-only dangerous waste may be sent to a RCRA Subtitle D permitted facility which can accept such material under their permit. Landfills permitted to accept municipal waste are normally RCRA Subtitle D permitted facilities.

Soil with arsenic or lead concentrations above MTCA cleanup levels which does not classify as State-only dangerous waste is problem waste. It is our understanding that problem waste is regulated by the Snohomish Health District. Problem waste may also be disposed of at RCRA Subtitle D facilities if allowed by their permit.

Development of a Sampling Plan

A sampling plan for the project should have two purposes. The first is to define volumes of soil in the three categories discussed above so that plans can be made for proper handling and disposal. The second is to define soil left in place and ensure that the project excavates sufficient material to achieve cleanup levels.

You should discuss with your consultant how to best define volumes of soil in the three categories for proper handling. We suggest that proposed waste disposal companies be involved so that you have an agreement of what documentation

is required for acceptance. The City will have to decide how much sampling to perform prior to the start of grading to adequately characterize the soil to be excavated so as to avoid surprises during construction. Ecology suggests you have a plan for handling of all three categories of material. Although the area on which the project is to be constructed may not encounter state-only dangerous waste or federally-designated hazardous waste, we recommend the City have contingency plans in place which provide for handling such material if encountered. The fundamental idea is to have plans in place so that construction delays are not incurred if state-only dangerous waste or federally-designated hazardous waste are encountered.

Finally, another consideration is that the Cleanup Action Plan for the site may specify measures to be taken for road projects such as this one in areas with contamination above the MTCA cleanup level of 7 ppm. Ecology has not developed these measures yet. A conservative approach would be to excavate all soil in the areas to be graded to the cleanup level of 7 ppm arsenic and verify that cleanup had been achieved in a manner consistent with Ecology sampling and statistical guidance. Your consultant, Geoengineers, can assist you in developing a program.

Should you have any questions, please call me at (206) 649-7200.

Sincerely,

David L. South

David L. South
Senior Engineer, Toxics
Cleanup Program

DLS:dls

cc: Kenneth R. Storseth
Tom Aldrich
Everett Smelter/SIT1.2

CORRESPONDENCE REGARDING HEALTH AND SAFETY

STATE OF WASHINGTON

DEPARTMENT OF LABOR AND INDUSTRIES

Division of Consultation and Compliance
8625 Evergreen Way, Suite 250
Everett, WA 98208

March 28, 1997

Ken Wilson
Hydrometrics, Inc.
950 Pacific Ave., Suite 700
Tacoma, WA 98402

Dear Mr. Wilson:

WAC 296-62-3040(3)(d) allows a minimum of 24 hours of off site training for any workers performing excavation activities, as you described in your letter, provided the work area has been monitored and fully characterized. Although air monitoring has not been performed on the Everett site you indicate that monitoring was conducted on projects were the concentrations of arsenic and lead in the soil exceeded those found on the Everett site. With this in mind, I believe a common sense approach would be to assume that with similar work practices and dust control measures that airborne levels of arsenic and lead would be lower than the 1.5 ug/m3 (arsenic) reported at the Ruston Soils Project.

Therefore, the Department will allow the reduced training level (24 hours) as long as initial air monitoring for both arsenic and lead is conducted, upon initial entry, for each work operation to accurately determine the airborne concentrations at the Everett site. I would ask that you request a rush analysis of the work operations which you feel constitute the greatest exposure risk, thus minimizing the unknown exposure time.

Your actions and interest in safety and health are sincerely appreciated. If you have any additional questions please contact Bob Parker at (206) 290-1422.

Sincerely,

John Ecker
Compliance Program Manager

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (206)572-5481 • FAX (206)572-5487

March 5, 1997

Mike Young
Snohomish Health District
3020 Rucker Ave, Suite 300
Everett, WA 98201

RE: Marine View Drive Widening and Legion Memorial Golf Course Improvements

Dear Mike:

It is Hydrometrics understanding that you are concerned with fugitive dust emissions from two City of Everett projects scheduled to begin in late spring, 1997. The two projects are Marine View Drive Widening for City of Everett Public Works and the Legion Memorial Golf Course Improvements for City of Everett Parks and Recreation. Both projects will require excavation and movement of soils. Hydrometrics has developed a Health and Safety Plan for each project that does not explicitly require air monitoring. Each plan has been prepared in accordance with Washington Industry Safety and Health Agency (WISHA) regulations.

Specific arsenic and lead standards are established for employee protection. WISHA has set action limits for arsenic and lead at 5 and 25 $\mu g/m^3$ respectively. The regulations state that air monitoring is not required unless it is suspected that exposures of any employee may be above the action limit.

Hydrometrics' has extensive experience in air monitoring during excavation activities from similar projects including the residential and smelter remediations for Asarco in Tacoma. With this experience and the results of air monitoring performed on these projects, it is Hydrometrics expectation that exposures will be substantially below action limits for arsenic and lead at the two City of Everett projects. The concentrations in the soil for these two elements are well below those encountered at the Tacoma projects.

Some results of the industrial hygiene air monitoring for the residential remediation are attached. Monitoring results have consistently shown values for employee exposure are well below the action limits for arsenic and lead.

There are no specific standards which apply to fugitive dust emissions for arsenic and lead. There is a general dust standard of 10,000 ug/m^3 from WISHA. However, for the two Tacoma projects, Asarco and EPA agreed to target levels for fugitive arsenic and lead dust. The target levels were set at 0.2 $\mu g/m^3$ for arsenic and 0.5 $\mu g/m^3$ for lead over a 24 hour period and are considered to be protective of the residential area in proximity to operations even though they are not emission standards.

The residential remediation project in Tacoma involves monitoring at each working site boundary on a daily basis. The concentrations of arsenic in soil range from approximately 230 to 16,000 mg/kg. Lead ranges from approximately 300 to 16,000 mg/kg. Monitoring data for August, 1996 is attached. Over three years of operations, the target limits have been exceeded 7 times for arsenic and none for lead. Each exceedance was tied to a lack of dust control being performed while large equipment was in operation and in areas that contained significantly higher arsenic concentrations than those at either project site in Everett. Please note that due to the expense of 24 hour monitoring, it was considered more expedient to monitor over the eight to nine hour operational period and not utilize the 'dilution' effect given by a 24 hour sample. It is highly likely that if the results were based upon a 24 hour monitoring period, the exceedances noted would not have occurred.

The smelter remediation project included approximately 65 acres of exposed soils with arsenic concentrations ranging from 1,000 mg/kg to 60,000 mg/kg at the surface. During 1993 and 1994, the structures at the smelter were demolished. Only one exceedance of the arsenic target level had occurred outside workdays. This exceedance was attributed to the combination of partially demolished buildings exposing more dusts in their framework and a 40 mph windstorm that had occurred over the weekend. No other exceedance had occurred during non-operational hours over this project nor for the years that the site has been idle since the first phase of the demolition in 1989.

Hydrometrics believes that based on past experience, air monitoring is not necessary for the two City projects as long as dust suppression is maintained during construction activities. However, it is Hydrometrics understanding that Public Works and Parks and Recreation will conduct periodic monitoring to obtain air quality data. This data will be sent to the Snohomish Health District to demonstrate applicable standards are being met at both projects.

If you have any questions, please call me.

Sincerely,

Ken Wilson, C. S. P.
Health & Safety Officer

cc: Dave Davis and Ken Storseth, City of Everett Public Works
Jay Magill, City of Everett Parks and Recreation

attachments

RESIDENTIAL REMEDIATION DATA FOR ACTION LIMITS

SITE ADDRESS / DATE	SOIL LAYERS REMOVED ARSENIC N	MEAN	RANGE	S.D.	INDUSTRIAL HYGIENE ARSENIC RESULTS	SOIL LAYERS REMOVED LEAD MEAN	RANGE	S.D.	INDUSTRIAL HYGIENE LEAD RESULTS	TASK
5316 N 49 ST	20	367	41 - 797	179		442	19 - 998	245		
7/15/94					1.4					BOBCAT OPERATOR
5312 N 49 ST	16	466	83 - 2003	467		565	65 - 2609	616		
7/18/94					1					BOBCAT OPERATOR
7/18/94					< 0.11					BOBCAT OPERATOR
5228 N 49 ST	15	404	107 - 726	181		575	141 - 1127	264		
4/13/94					< 0.81				< 1.6	LABOR, SHOVEL
4/14/94					< 0.76				< 1.5	LABOR, SHOVEL
4/14/94					< 0.96				< 1.9	LABOR, SHOVEL
4/15/94					< 0.9				< 1.8	LABOR, SHOVEL
4/15/94					< 0.86				< 2.2	LABOR, SHOVEL
5224 N 49 ST	20	637	113 - 1871	362		864	93 - 2044	489		
4/22/94					< 0.17					DOZER OPERATOR
5220 N 49 ST	15	401	82 - 657	171		472	55 - 812	227		
4/19/94					< 0.23					BOBCAT OPERATOR
4/20/94					< 0.31					LABOR, SHOVEL
DUMP SITE										
4/27/94					1.4					LOADER OPERATOR
8/15/94					1.2					DOZER OPERATOR
FIRST STAGE, DECON BLDG										
4/26/94					< 0.19					

MONTHLY AIR MONITORING DATA FOR TARGET LEVELS

SITE MONITORED ADDRESS(ES)	SITE CODE(S)	DATE	ARSENIC VALUE (in ug/m3)
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/1/96	< 0.09
5227 N HIGHLAND ST	RGF13	8/1/96	< 0.091
5219 N HIGHLAND ST, 5225 N HIGHLAND ST	RGF11, RGF12	8/1/96	< 0.09
5227 N HIGHLAND ST	RGF13	8/2/96	< 0.088
5219 N HIGHLAND ST, 5225 N HIGHLAND ST	RGF11, RGF12	8/2/96	< 0.088
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/2/96	< 0.089
5227 N HIGHLAND ST	RGF13	8/5/96	< 0.094
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/5/96	< 0.094
5227 N HIGHLAND ST	RGF13	8/6/96	< 0.082
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/6/96	< 0.083
5212 N SHIRLEY ST, 5210 N SHIRLEY ST	RGG06, RGG07	8/6/96	< 0.084
5206 N SHIRLEY ST, 5204 N SHIRLEY ST	RGG08, RGG09	8/6/96	< 0.086
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/7/96	< 0.083
5212 N SHIRLEY ST, 5210 N SHIRLEY ST	RGG06, RGG07	8/7/96	< 0.084
5206 N SHIRLEY ST	RGG08	8/7/96	< 0.085
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/7/96	< 0.087
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/8/96	< 0.086
5212 N SHIRLEY ST, 5210 N SHIRLEY ST, 5206 N SHIRLEY ST	RGG06, RGG07, RGG08	8/8/96	< 0.086

SITE MONITORED ADDRESS(ES)	SITE CODE(S)	DATE	ARSENIC VALUE (in ug/m3)
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/8/96	< 0.088
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/9/96	< 0.096
5212 N SHIRLEY ST, 5210 N SHIRLEY ST	RGG06, RGG07	8/9/96	< 0.099
5206 N SHIRLEY ST	RGG08	8/9/96	< 0.098
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/9/96	< 0.099
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/12/96	< 0.1
5212 N SHIRLEY ST, 5210 N SHIRLEY ST	RGG06, RGG07	8/12/96	< 0.089
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/12/96	S. M.
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/13/96	< 0.089
5212 N SHIRLEY ST, 5210 N SHIRLEY ST	RGG06, RGG07	8/13/96	< 0.088
5220 N SHIRLEY ST, 5218 N SHIRLEY ST	RGG03, RGG04	8/13/96	< 0.088
5515 N 52nd ST	RGG11	8/14/96	< 0.087
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/14/96	< 0.087
5210 N SHIRLEY ST, 5206 N SHIRLEY ST	RGG07, RGG08	8/14/96	< 0.09
5515 N 52nd ST	RGG11	8/15/96	< 0.088
5211 N WINNIFRED ST	RGG14	8/15/96	< 0.089
5204 N SHIRLEY ST, 5202 N SHIRLEY ST	RGG09, RGG10	8/15/96	< 0.092
No Excavation Activity		8/16/96	
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/19/96	< 0.09
5209 N WINNIFRED ST, 5211 N WINNIFRED ST	RGG13, RGG14	8/19/96	< 0.089
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/20/96	< 0.087
5209 N WINNIFRED ST, 5211 N WINNIFRED ST	RGG13, RGG14	8/20/96	< 0.087

SITE MONITORED ADDRESS(ES)	SITE CODE(S)	DATE	ARSENIC VALUE (in ug/m3)
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/21/96	< 0.086
5209 N WINNIFRED ST, 5211 N WINNIFRED ST	RGG13, RGG14	8/21/96	< 0.086
5215 N WINNIFRED ST	RGG15	8/21/96	< 0.086
5215 N WINNIFRED ST	RGG15	8/22/96	< 0.09
5209 N WINNIFRED ST, 5211 N WINNIFRED ST	RGG13, RGG14	8/22/96	< 0.09
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/22/96	< 0.091
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/23/96	< 0.087
5209 N WINNIFRED ST, 5211 N WINNIFRED ST	RGG13, RGG14	8/23/96	< 0.087
5215 N WINNIFRED ST, 5219 N WINNIFRED ST	RGG15, RGG16	8/23/96	0.17
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/26/96	< 0.089
5209 N WINNIFRED ST, 5211 N WINNIFRED ST	RGG13, RGG14	8/26/96	< 0.088
5215 N WINNIFRED ST, 5219 N WINNIFRED ST	RGG15, RGG16	8/26/96	< 0.088
5515 N 52nd ST, 5207 N WINNIFRED ST	RGG11, RGG12	8/27/96	< 0.087
5215 N WINNIFRED ST, 5219 N WINNIFRED ST	RGG15, RGG16	8/27/96	< 0.087
5515 N 52nd ST	RGG11	8/28/96	< 0.088
5215 N WINNIFRED ST, 5219 N WINNIFRED ST	RGG15, RGG16	8/28/96	< 0.086
5227 N WINNIFRED ST	RGG18	8/28/96	< 0.088
5215 N WINNIFRED ST, 5219 N WINNIFRED ST	RGG15, RGG16	8/29/96	< 0.085
5227 N WINNIFRED ST	RGG18	8/29/96	< 0.086
5215 N WINNIFRED ST, 5219 N WINNIFRED ST	RGG15, RGG16	8/30/96	< 0.09
5227 N WINNIFRED ST	RGG18	8/30/96	< 0.089

Note: The following identifies the average and range of arsenic concentrations in the soil
RGG11 (ave = 455 ppm, range 252-731 ppm) RGG12 (ave = 443 ppm, range 270-627 ppm)
RGG13 (ave = 578 ppm, range 282-873 ppm) RGG14 (ave = 380 ppm, range 124-710 ppm)
RGG15 (ave = 274 ppm, range 181-508 ppm) RGG16 (ave = 408 ppm, range 226-1032 ppm)

CORRESPONDENCE REGARDING SAMPLING

ASARCO

Thomas L. Aldrich
Site Manager
Tacoma Plant

April 1, 1997

Mr. Dave Nazy
Toxics Cleanup Program
Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

RE: Legion Memorial Golf Course and Park Results

Dear Dave:

I have enclosed Tables 1-3 that contain the arsenic and lead results for soil samples collected at the Legion Memorial Golf Course and Park in Everett. Some of the samples were previously analyzed by the City of Everett. The remaining archived samples that were collected to a depth of two feet were analyzed by Asarco.

In addition to the tables, attached is Hydrometrics DataMan report containing the samples analyzed by Asarco, a diskette that contains the DataMan report, and a list and results of samples that were analyzed for cadmium. It is my understanding that the City of Everett has sent you a map showing the sample locations along with their results; therefore, I have not enclosed one. In the near future, Hydrometrics will update the iso-contour maps for the site that will depict arsenic and lead concentrations for the 0-6, 6-12, 12-18, and 18-24 inch intervals.

If you have any questions regarding the sample results, please call Steve Thompson at (206) 572-5481.

Very truly yours,

ASARCO Incorporated

Thomas L. Aldrich

enclosures

cc: Mike Thorp, Heller, Ehrman, White, and McAuliffe
Alison Freeman-Gleason, Heller, Ehrman, White, and McAuliffe
Jay Magill, City of Everett Parks and Recreation
Steve Thompson, Hydrometrics

Table 1
Summary of Hydrometrics Soil Analytical Data
American Legion Memorial Golf Course-Fairways
Everett, Washington

Fairways	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Hole 1	1	42	50	101	43	<10	<20	<10	<20
	1 (dup)	47	40	-	-	-	-	-	-
	2	70	54	119	71	<10	<20	<10	<20
	3	31	38	38	47	42	49	53	59
	4	25	43	50	57	86	83	18	<20
	5	3.2	6.8	<10	<20	<10	<20	<10	<20
	6	11	18	<10	<20	<10	<20	<10	<20
	7	14	26	<10	<20	<10	<20	<10	<20
	7 (dup)	-	-	-	-	<10	<20	-	-
	8	17	28	<10	<20	<10	<20	<10	<20
HOLE 2	9	20	28	<10	<20	<10	<20	11	<20
	10	6	9.5	19	21	<10	<20	27	<20
	11	9.3	53	10	<20	<10	<20	<10	<20
	12	14	36	13	23	<10	<20	<10	<20
	13	17	91	17	<20	<10	<20	<10	<20
	14	10	49	<10	32	<10	<20	<10	<20
	14 (dup)	-	-	10	40	-	-	-	-
	15	13	34	<10	<20	<10	<20	<10	<20
HOLE 3	16	10	35	<10	<20	10	<20	15	<20
	17	16	40	<10	<20	<10	<20	<10	<20
	18	20	38	<10	<20	<10	<20	<10	<20
HOLE 4	19	17	35	10	<20	<10	<20	<10	<20
	20	10	23	<10	<20	<10	<20	<10	<20
	20 (dup)	10	21	-	-	-	-	<10	<20
	21	9.2	22	<10	<20	<10	<20	<10	<20
	22	8.5	21	13	<20	<10	<20	<10	<20
	23	24	46	26	38	14	<20	<10	<20
HOLE 5	24	6.4	13	11	<20	<10	<20	13	<20
	25	15	30	<10	<20	<10	<20	13	<20
	26	22	40	18	30	<10	<20	<10	<20
	27	15	25	<10	<20	<10	<20	<10	<20
	27 (dup)	-	-	-	-	<10	<20	-	-
	28	13	22	13	44	<10	<20	10	<20
	29	17	46	21	27	16	20	<10	<20
HOLE 6	30	29	59	31	44	<10	<20	<10	<20
	31	40	50	43	50	15	<20	<10	<20
	32	39	54	12	<20	<10	<20	<10	<20
	33	54	93	38	56	<10	<20	<10	<20
	34	48	64	24	29	<10	<20	<10	<20
	34 (dup)	-	-	33	41	-	-	-	-
	35	49	44	36	46	<10	<20	<10	<20

Fairways	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
HOLE 7	36	110	93	47	70	13	<20	<10	<20
	37	46	45	<10	<20	<10	<20	<10	<20
	38	93	64	16	<20	<10	<20	<10	<20
	39	77	70	56	47	<10	<20	<10	<20
	40	7.5	5.7	76	60	16	<20	<10	<20
	40 (dup)	5.8	4.7	-	-	-	-	<10	<20
HOLE 8	41	46	50	73	62	66	43	31	24
	42	7.7	13	12	<20	26	<20	38	23
	43	90	74	40	35	<10	<20	<10	<20
	44	65	61	24	44	21	<20	<10	<20
	45	120	92	220	72	55	<20	<10	<20
	46	23	34	11	<20	<10	<20	<10	<20
	47	50	61	51	51	16	<20	<10	<20
	47 (dup)	-	-	-	-	13	<20	-	-
HOLE 9	48	92	120	76	93	<10	<20	<10	<20
	49	75	81	65	60	27	<20	<10	<20
	50	80	83	120	107	43	36	34	28
HOLE 10	51	18	9.3	17	<20	15	<20	19	<20
	52	62	85	26	32	25	<20	<10	<20
	53	110	140	110	142	200	341	140	200
	54	45	29	13	<20	3.4	<20	<10	<20
	54 (dup)	-	-	-	-	<10	<20	-	-
	55	63	71	138	115	71	62	17	<20
	56	13	44	21	83	22	148	21	93
HOLE 11	57	140	200	230	425	190	148	37	<20
	58	46	38	5.4	<20	<10	<20	<10	<20
	59	83	83	176	137	36	24	<10	<20
	60	60	60	59	47	166	184	110	59
	60 (dup)	58	50	-	-	-	-	92	42
	61	120	120	55	46	12	<20	<10	<20
	62	58	70	129	125	155	159	27	<20
	63	14	130	22	64	<10	<20	<10	<20
HOLE 12	64	83	120	292	335	497	421	48	<20
	65	160	120	160	91	7.6	<20	<10	<20
	66	200	210	180	181	25	24	12	<20
	67	200	180	310	220	130	42	4.3	<20
	67 (dup)	-	-	-	264	-	-	-	-
	68	200	180	220	203	39	46	48	45
HOLE 13	69	25	59	28	83	35	84	62	66
	70	250	190	140	67	8	<20	<10	<20
	71	370	240	290	225	52	108	49	<20
	72	42	42	18	20	12	<20	14	<20
HOLE 14	73	42	45	<10	<20	<10	<20	<10	<20
	73 (dup)	-	-	-	-	-	-	<10	<20
	74	40	39	11	<20	10	<20	<10	<20
	75	65	65	125	115	56	48	<10	<20

Fairways	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
HOLE 15	76	81	65	72	51	<10	<20	<10	<20
	77	4	5.8	<10	<20	91	67	91	80
	78	51	79	85	81	51	57	50	<20
	79	68	76	29	28	<10	<20	11	<20
	80	32	37	33	26	<10	<20	<10	<20
	80 (dup)	38	49	-	-	<10	<20	-	-
	81	47	48	27	25	<10	<20	<10	<20
	82	17	23	<10	<20	<10	<20	<10	<20
	83	26	44	29	53	14	<20	<10	<20
HOLE 16	84	33	43	20	20	<10	<20	<10	<20
	85	19	31	11	<20	<10	<20	13	<20
	86	36	50	<10	<20	<10	<20	<10	<20
	87	20	32	11	<20	<10	<20	<10	<20
	87 (dup)	-	-	13	<20	-	-	-	-
	88	19	43	13	<20	<10	<20	11	<20
	89	15	63	<10	<20	<10	<20	10	<20
	90	6.1	24	<10	<20	<10	<20	<10	<20
HOLE 17	91	4.9	14	<10	<20	<10	<20	<10	<20
	92	2.2	5.6	<10	20	10	<20	<10	<20
	93	29	94	<10	<20	<10	<20	<10	<20
	93 (dup)	-	-	-	-	-	-	<10	<20
	94	35	54	13	<20	<10	<20	<10	<20
	95	16	30	11	<20	<10	<20	<10	<20
HOLE 18	96	24	43	51	52	12	<20	<10	<20
	97	29	44	37	37	17	<20	<10	<20
	98	54	67	17	20	12	<20	11	<20
	99	55	61	15	20	<10	<20	<10	<20
	100	52	48	64	36	18	<20	<10	<20
	100(dup)	-	-	-	-	26	<20	-	-
	101	56	68	36	32	<10	<20	<10	<20
	102	68	67	46	38	12	<20	<10	<20
	103	97	100	124	119	71	78	12	<20
Samples from 1995 Asarco RI	S101	60	90	120	140	-	-	50	13
	S103	84	55	155	77	-	-	163	140
	S201	500	598	10	12	-	-	12	17
	S202	18	23	26	32	-	-	16	17
	S203	159	238	<5	8.6	-	-	<5	8.4
	S301	52	64	34	58	-	-	36	104
	S302	150	851	771	26	-	-	7.3	26
	S303	25	30	<5	8.5	-	-	<5	12

*- = not analyzed

Table 2
Summary of Hydrometrics Soil Analytical Data
American Legion Memorial Golf Course-Lakes
Everett, Washington

Lakes	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
LAKE 1	150	12	32	2.3	8.5	<10	<20	10	<20
	151	13	35	7	15	<10	<20	<10	<20
	152	11	22	4.7	9	<10	<20	<10	<20
	153	12	34	16	42	<10	<20	<10	<20
	154	13	31	3.3	9.3	<10	<20	<10	<20
	154(dup)	15	35	-	-	<10	<20	<10	<20
LAKE 2	155	29	56	21	31	<10	<20	17	<20
	156	4.4	32	12	58	12	<20	<10	<20
	157	12	28	13	22	<10	<20	10	<20
	158	21	41	27	44	17	43	<10	<20
	159	6.7	13	2.9	4.1	<10	<20	<10	<20
LAKE 3	160	25	35	5.3	7.5	<10	<20	15	<20
	160(dup)	29	40	-	-	-	-	-	-
	161	61	60	30	22	<10	<20	<10	<20
	162	49	72	48	41	15	<20	<10	<20
	163	66	89	18	31	<10	<20	<10	<20
	164	39	41	25	26	13	<20	<10	<20

*- = not analyzed

Table 3
Summary of Hydrometrics Soil Analytical Data
Legion Memorial Park
Everett, Washington

Area	Sample Number	Depth 0-6		Depth 6-12		Depth 12-18		Depth 18-24	
		Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)	Total Arsenic (mg/kg)	Total Lead (mg/kg)
Arboretum	200	23	67	23	57	29	46	26	51
Horticulture Center	201	17	21	<7	<7	<10	<20	35	<20
Tennis Court	202	28	50	32	47	39	54	<10	<20
	202(dup)	24	69	-	-	-	-	-	-
Baseball Field	203	30	30	<7	<7	<10	<20	<10	<20
	204	54	63	32	61	22	27	<10	<20
Restrooms	205	62	73	22	14	20	<20	15	<20
	205(dup)	60	69	-	-	-	-	-	-
Picnic Shelter	206	70	66	76	54	76	44	20	<20
Flagpole	207	77	42	7.9	11	<10	<20	<10	<20
Storage Area	208	11	17	11	12	<10	<20	<10	<20
South End of View Overlook	209	20	29	<7	8.8	<10	<20	<10	<20
	209(dup)	-	-	-	-	<10	<20	-	-

*- = not analyzed

The following samples had cadmium analyses performed (results in mg/kg):

Sample	Depth Interval	Total As	Total Pb	Total Cd
44	6-12 inch	24	44	<1
45	6-12 inch	220	72	2.6
46	6-12 inch	11	<20	<1
52	12-18 inch	25	<20	<1
53	6-12 inch	110	142	2.3
53	12-18 inch	200	341	6.1
57	6-12 inch	230	425	3.8
57	18-24 inch	37	<20	<1
67	6-12 inch	310	220	3.4
67	12-18 inch	130	42	1.9
71	12-18 inch	52	108	<1

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (206)572-5481 • FAX (206)572-5487

March 5, 1997

Mr. Dave Nazy
Toxics Cleanup Program
Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

RE: City of Everett's Marine View Drive Improvement Project

Dear Dave:

The City submitted an *Independent Remedial Action Plan* for the widening project. As you may recall, the plan identified that approximately 6,000 to 7,000 cubic yards of excess material would be generated from the south side of the road. The City was going to locate glacial till to comprise the excess material for two reasons. First, the north side requires import fill and the till seemed suitable and second, existing information indicated the till was not a "problem waste"so it could be used off-site as well.

Recent information has shown that the till cannot be utilized as structural fill. Therefore, not only does the 7,000 cubic yards of till from the south side have to be managed off-site, 5,000 cubic yards of till must be removed from the north side as well. It is anticipated that approximately 7,000 cubic yards of till will be given to the Port of Everett and 5,000 cubic yards of till will be used at the City landfill. Please note that existing information indicates the till contains arsenic concentrations well below 20 ppm (refer to letter dated August 29, 1996 - Till Sampling Data).

The *Independent Remedial Action Plan* stated that confirmational sampling of the till would be conducted prior to excavation and samples would be collected every 50 linear feet. This procedure was proposed in order to allow much of the till to be used as fill immediately upon its excavation. Because the till will no longer be used as fill, the City will sample and analyze the material after it is removed and stockpiled. The till will be stockpiled in wind rows thus allowing areas to be segregated if necessary. Five discrete samples will be collected and analyzed from the City landfill location while seven discrete samples will be collected and analyzed from the Port of Everett location.

If you have any questions regarding this change for confirmational sampling, please call me.

Sincerely,

Hydrometrics, Inc.

Steve Thompson
Project Manager

cc: Dave Davis and Ken Storseth, City of Everett Public Works

CORRESPONDENCE REGARDING OFF-SITE DISPOSAL

ASARCO

Thomas L. Aldrich
Site Manager
Tacoma Plant

March 19, 1998

Dr. David L. South, Site Manager
Toxics Cleanup Program
Department of Ecology
3190 160th Ave SE
Bellevue, WA 98008

RE: Request for Authorization for Subgrade Backfill Material
City of Everett East Marine View Drive Widening Project
Everett Smelter Site

Dear Dave:

As you know, the City of Everett (Everett) and Asarco have been working together to manage excess soil attributable to Everett's road widening project on East Marine View Drive. The excavated material will be transported to the Tacoma Smelter for use as subgrade backfill below the site-wide cap. The review and approval process for this material is the same as was followed for dealing with soil from Puget Sound Energy's natural gas pipeline installation last year (see Asarco's September 17, 1997 request for approval letter to Ecology). Asarco requested EPA's approval to accept this material at the Tacoma Smelter in a March 2, 1998 letter; you were copied on this request. EPA approved this material in a March 13, 1998 letter to Asarco, a copy of which is attached.

EPA's approval is contingent upon Ecology's authorization to proceed. Asarco requests Ecology's authorization to proceed, as described in Asarco's request to EPA. If you have any questions, please call me.

Very truly yours,

Thomas L. Aldrich
Site Manager

cc: Kevin Rochlin, Region 10 EPA

ASARCO Incorporated P.O. Box 1677 Tacoma, WA 98401 (253) 756-0201 FAX: (253) 756-0250
670\034\0066TAC03/19/98/n:files/670/word/EVERBACK1.DOC
INFORMATION CENTER (800) 750-5436 FAX: (253) 756-7414
email: 14626.151@compuserve.com

Mike Young, Snohomish Health District
Dave Davis, City of Everett
Catherine Carpenter, NECO
Anne Robison, NECO
Miji Ryan, Northwest Everett Neighborhood Association
Greg Glass, NECO
Alison Freeman-Gleason, Heller Ehrman, White & McAuliffe
Steve Werner, McCulley Frick and Gilman
Dave Nation, Hydrometrics

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

copy: A. Moore, NG Legal
A. Freeman-Glesson, HAWM
C. Stanovsky, Everett
D. Robbins, TSC

March 13, 1998

Reply To
Attn Of: ECL-111

Thomas L. Aldrich
Asarco, Inc.
P.O. Box 1677
Tacoma, Washington 98401

Re: Approval of Stockpile Material Request

Dear Mr. Aldrich:

Asarco has requested EPA's approval to stockpile approximately 3800 cubic yards of material from Everett (March 2, 1998 letter). EPA has reviewed the information which Asarco has provided to us. EPA's decision is based on the assumption that the information accurately represents the constituents of the material. The material may be transported to the Tacoma site for use during the remedial action.

If you have any questions, please feel free to call me at (206) 553-2106.

Sincerely,

Kevin Rochlin
Remedial Project Manager

cc: Bruce Cochran, Ecology
David Nation, Hydrometrics (E-mail)
Kevan Sharp, CH2M Hill (E-Mail)

Asarco\calcines

ASARCO

Thomas L. Aldrich
Site Manager
Tacoma Plant

March 2, 1998

Mr. Kevin L. Rochlin
Remedial Project Manager
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, ECL-111
Seattle, WA 98401

RE: Request to Stockpile Subgrade Backfill Material
City of Everett - East Marine View Drive Project
Asarco Tacoma Smelter - (0395)

Dear Mr. Rochlin:

In accordance with the Subgrade Backfill Approval Plan, Revision 2 (Plan) dated October 1996, Asarco requests approval to stockpile a total of approximately 3,800 cubic yards of material from the City of Everett's (City) East Marine View Drive widening project in Everett, Washington. This work is being performed by the City and is within the study area of the former Everett Smelter site (see Figure 1 - Project Location Map attached). This site is under the jurisdiction of the Washington Department of Ecology (Ecology).

Approximately 1,800 cubic yards of backfill material was excavated last fall from the south side of the street and is currently stockpiled in Everett. Approximately 2,000 cubic yards will be excavated this spring from the north side of the street. The excavated soil consists of the top six inches, including sod, and cannot be replaced in the excavation because it does not meet the structural requirements established by the City for road bed materials.

The information required in Section 5.0 of the Plan is provided below:

A) Approximately 3,800 cubic yards of material (soil and sod from the top six inches) will be excavated by the City. Attached are two tables that show the total arsenic and lead concentrations from past sampling investigations prepared by the City of Everett Public Works Department (*Independent Remedial Action Plan for East Marine View Drive Improvement Project*, Hydrometrics, July 1996). GeoEngineers collected samples along East Marine View Drive; the highest arsenic concentration in the surface samples was 150 mg/kg from Station 23 and the highest lead concentration was 360 mg/kg from Station 20 (see Table 1).

B) Hydrometrics attempted to delineate the area around Station 33 that indicated an arsenic concentration of 840 mg/kg at a depth of three feet. Table 2 contains laboratory results from that investigation. The highest arsenic concentration from the surface to a depth of one foot was 200 mg/kg at Station 33 + 50 while the highest lead concentration was 300 mg/kg at Station 33 + 50.

C) To comply with the requirements of the Plan, two composite samples were collected from the existing stockpiles by Hydrometrics and analyzed for total arsenic and lead, TCLP metals, polychlorinated biphenyls (PCBs), and total petroleum hydrocarbons (TPH). The analytical results are tabulated in Table 3. The analytical results indicate the material meets the criteria set forth in Table 3-1 of the Plan.

D) The material is a category (c) material (off-site material) as described in the Plan. This material will consist of soil with an estimated 20 to 25 percent organic content. Although this material does not meet the City's requirements for road bed backfill, it is similar to residential soils encountered in Ruston/North Tacoma.

E) This material is within the study area boundary for the Everett Smelter site which is under Ecology's jurisdiction. Asarco is subject to Ecology Enforcement Order No. DE97TC-N119 for this site. Ecology approval will also be required to approve removal of the material for reuse as subgrade backfill at the Tacoma Smelter.

F) A preliminary assessment of the best use of this material indicates it should not be placed below the expected post-RA groundwater elevation. It should not be used in areas subject to higher structural loads without further amendment and confirmational testing.

G) The material will be stockpiled along with Ruston/North Tacoma residential soils in the active stockpile at the southern-most end of the Tacoma Smelter (see Figure 4-1 of the Plan). Once the material is stockpiled in Tacoma, it will be covered in a manner similar to that used for Ruston/North Tacoma residential soils.

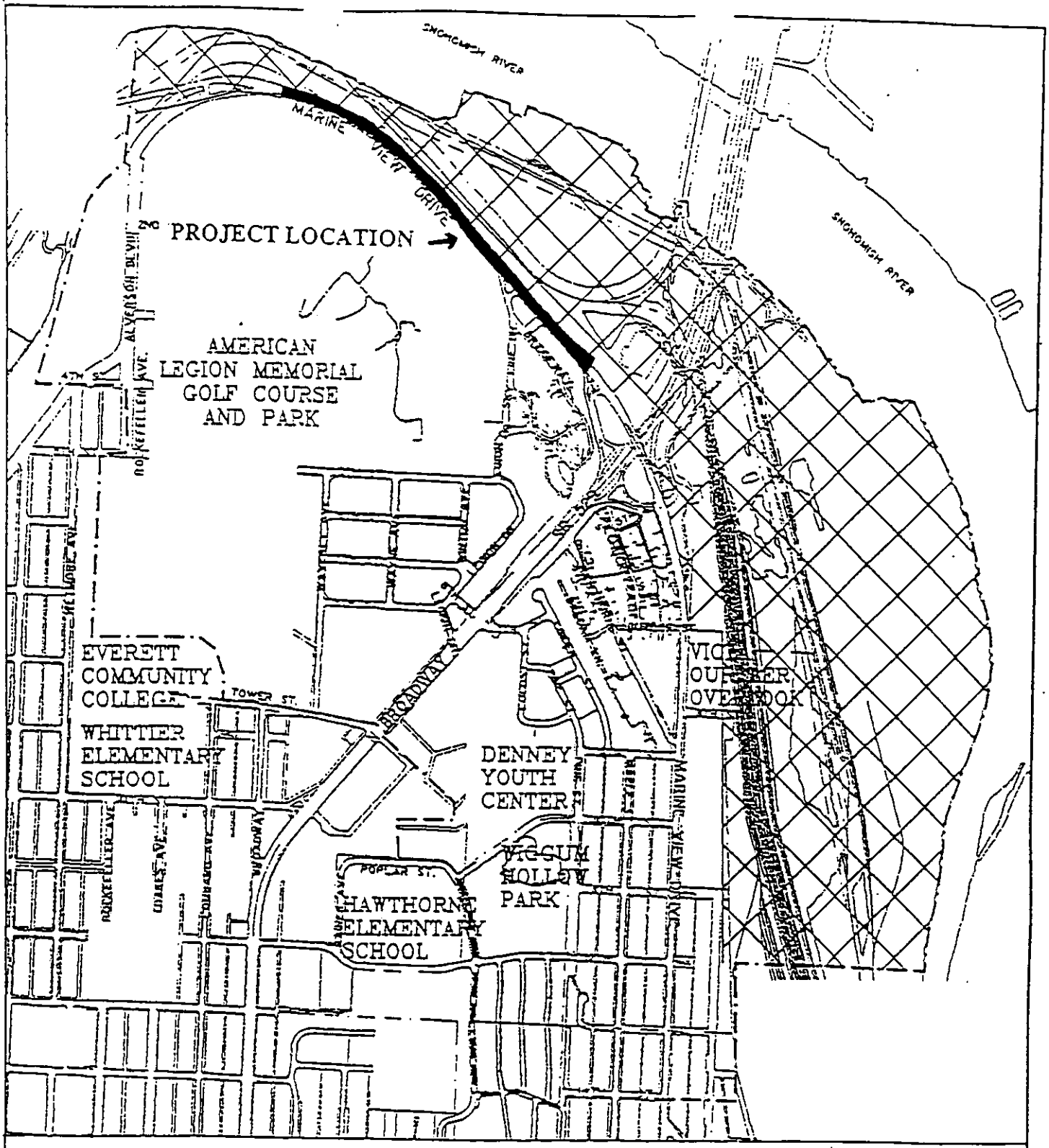
Please contact either Dave Nation at Hydrometrics or me if you have any questions or comments.

Very truly yours,
ASARCO Incorporated

Thomas L. Aldrich
Site Manager

Enclosure (5 copies)

cc: w/Enclosure: David South - Washington Department of Ecology (1 copy
Bruce Cochran - Washington Department of Ecology (1 copy)
Dave Davis - City of Everett (1 copy)
Kevan Sharp - CH2MHill (2 copies)
Jim Montgomerie - Metropolitan Park District (1 copy)
Paul Miller - City of Tacoma (1 copy)
Ray Corpuz - City of Tacoma (1 copy)
Michael Transue - Town of Ruston (1 copy)
Charlene Hagen - Town of Ruston (1 copy)



EVERETT SMELTER SITE EVERETT, WASHINGTON	PROJECT LOCATION MAP	FIGURE 1

Table 1
Summary of GeoEngineers' Soil Analytical Data
East Marine View Drive
Everett, Washington

Station	Offset From Fog line[1] (ft)	Hand Boring Number	Surface Sample		Depth = 1 ft		Depth = 3 ft[3]	
			Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)	Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)	Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)
13 + 00	10 R	14	32	16	24	<10	<10	<10
14 + 00	6 L	1	<10	15	<10	28	<10	110
15 + 00	5 R	15	<10	39	<10	<10	<10	<10
16 + 00	4.5 R	2	<10	250	<10	<10	<10	11
17 + 00	5 R	16	77	30	73	<10	<10	<10
18 + 00	4 L	3	<10	320	15	<10	<10	<10
19 + 00	7 R	17	<10	<10	<10	<10	<10	<10
20 + 00	4.5 R	4	<10	360	24	<10	<10	<10
21 + 00	6 R	18	31	34	<10	<10	<10	<10
22 + 00	8 L	5	<10	130	<10	<10	28	39
23 + 00	6 R	19	150	60	<10	<10	<10	<10
24 + 00	5 L	6	<10	60	<10	<10	13	14
25 + 00	7 R	20	49	59	<10	<10	<10	<10
26 + 00	6 L	7	<10	230	24	<10	<10	13
27 + 00	8 R	21	19	57	<10	<10	<10	<10
28 + 00	5 L	8	<10	230	<10	<10	<10	11
29 + 00	1<10 R	22	20	40	<10	<10	<10	<10
3<10 + 00	6 L	9	73	320	<10	<10	33	36
31 + 00	8 R	23	<10	52	<10	<10	<10	<10
32 + 00	5 L	10	<10	250	<10	35	51	65
33 + 00	1<10 R	24	58	77	350	44	840	70
34 + 00	8 L	11	<10	350	<10	<10	<10	<10
35 + 00	4 R	25	79	270	94	85	<10	<10
36 + 00	3 L	12	<10	99	<10	15	13	30
37 + 00	6 R	26	35	160	12	27	47	60
38 + 00	5 L	30	<10	110	<10	<10	<10	<10
39 + 00	6 R	27	<10	64	<10	<10	<10	14
4<10 + 00	4 L	13	33	210	<10	<10	<10	<10
42 + 00	5 L	29	23	280	<10	<10	<10	<10
46 + 00	5 R	28	<10	250	<10	<10	<10	<10

Notes:
1. R denotes distance from south fog line, L denotes distance from north fog line
2. Analyzed by EPA Method 6010
3. Samples obtained at Stations 13, 21, 30, 33 and 46 were at depth of 2 feet instead of 3 feet. Sample not obtained at this depth.

Table 2
Summary of Hydrometrics Soil Analytical Data
East Marine View Drive
Everett, Washington

Station	Offset From Fog line[1] (ft)	Depth 0-12		Depth 12-24		Depth 24-36		Depth 36-48	
		Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)	Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)	Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)	Total Arsenic[2] (mg/kg)	Total Lead[2] (mg/kg)
32 + 00 R (1)	7 ft. S.	40	250	55	16				
32 + 25 R (2)	6 ft S.	35	93	46	58				
32 + 25 R (2)dup	6 ft. S.			73	74				
32 +50 R (3)	6 ft. S.	77	310	26	19				
32 + 75 R (4)	11 ft. S.	150	60	170	150	170	120	69	18
33 + 25 R (5)	8 ft. S.	92	62	21	50	25	54	60	320
33 + 50 R (6)	9 ft. S.	200	110	51	34	45	44	72	140
33 + 75 R (7)	6 ft. S.	100	200	480	180	45	36	35	100
34 + 00 R (8)	11 ft. S.	100	39	140	70				
32 + 50 L (9)	6 ft. N.	130	180	15	40				
32 + 75 L (10)	7 ft. N.	46	220	25	53				
32 + 75 L (10)dup	7 ft. N.	38	250						
33 + 00 L (11)	5 ft. N.	69	120	39	220				
33 + 25 L (12)	7 ft. N.	32	170	38	110				
33 + 50 L (13)	6 ft. N.	19	300	16	41				

Notes:
1. R denotes distance from south fog line, L denotes distance from north fog line
2. Analyzed by EPA Method 6020
3. Samples obtained at Stations 13, 21, 30, 33 and 46 were at depth of 2 feet instead of 3 feet.
   Sample not obtained at this depth.

TABLE 3
Summary Results - Subgrade Backfill Tests
East Marine View Drive Project

Sample Number	Total As (mg/kg)	Total Pb (mg/kg)	TPH (mg/Kg)	PCBs (mg/Kg)	TCLP (mg/L)						
					As	Cd	Cr	Pb	Se	Ag	Hg
EVT-9801-500	41	54	27	ND	ND	ND	ND	ND	ND	ND	ND
EVT-9801-501	62	180	200	ND	ND	ND	ND	0.16	ND	0.51	ND

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-500
Lab ID:	70124-01
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/27/98
Dilution Factor	10
% Solids	78.85

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	41	1.2	
Lead	54	0.62	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-501
Lab ID:	70124-02
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/27/98
Dilution Factor	10
% Solids	82.85

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	62	1.2	
Lead	180	0.58	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (253)922-2310 - FAX (253)922-5047

Report To: Hydrometrics, Inc. Date: January 30, 1998

Report On: Analysis of Liquid Report No.: 70124

IDENTIFICATION:
Samples received on 01-22-98
Project: 700 Marine View Drive Widening

ANALYSIS:

Lab Sample No. 70124-1 Client ID: EVT-9801-500

TPH Per EPA Method 418.1
Date Extracted: 1-26-98
Date Analyzed: 1-26-98
Units: mg/L

Parameter	Result	POL	Flag
Total Petroleum Hydrocarbons	27	12	

Lab Sample No. 70124-2 Client ID: EVT-9801-501

TPH Per EPA Method 418.1
Date Extracted: 1-26-98
Date Analyzed: 1-26-98
Units: mg/L

Parameter	Result	POL	Flag
Total Petroleum Hydrocarbons	200	11	

ND - Not Deteceted
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-500
Lab ID:	70124-01
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/28/98
% Solids	78.85

PCBs by USEPA Method 8080

Surrogate	% Recovery	Flags	Recovery Limits Low	High
TCMX	94		44	145
Decachlorobiphenyl	95		52	125

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Aroclor 1016	ND	0.13	
Aroclor 1221	ND	0.13	
Aroclor 1232	ND	0.13	
Aroclor 1242	ND	0.13	
Aroclor 1248	ND	0.13	
Aroclor 1254	ND	0.13	
Aroclor 1260	ND	0.13	
Aroclor 1262	ND	0.13	
Aroclor 1268	ND	0.13	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-501
Lab ID:	70124-02
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/29/98
% Solids	82.85

PCBs by USEPA Method 8080

Surrogate	% Recovery	Flags	Recovery Limits Low	High
TCMX	96		44	145
Decachlorobiphenyl	91		52	125

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Aroclor 1016	ND	0.11	
Aroclor 1221	ND	0.11	
Aroclor 1232	ND	0.11	
Aroclor 1242	ND	0.11	
Aroclor 1248	ND	0.11	
Aroclor 1254	ND	0.11	
Aroclor 1260	ND	0.11	
Aroclor 1262	ND	0.11	
Aroclor 1268	ND	0.11	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-500
Lab ID:	70124-01
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/26/98
Dilution Factor	1

TCLP Metals by ICP - USEPA Method 6010

Analyte	Result (mg/L)	PQL	Flags
Arsenic	ND	0.4	
Cadmium	ND	0.08	
Chromium	ND	0.01	
Lead	ND	0.15	
Selenium	ND	0.5	
Silver	ND	0.02	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-500
Lab ID:	70124-01
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/26/98
Dilution Factor	1

TCLP Mercury by CVAA - USEPA Method 7470

Analyte	Result (mg/L)	PQL	Flags
Mercury	ND	0.002	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-501
Lab ID:	70124-02
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/26/98
Dilution Factor	1

TCLP Metals by ICP - USEPA Method 6010

Analyte	Result (mg/L)	PQL	Flags
Arsenic	ND	0.4	
Cadmium	ND	0.08	
Chromium	ND	0.01	
Lead	0.16	0.15	
Selenium	ND	0.5	
Silver	0.51	0.02	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9801-501
Lab ID:	70124-02
Date Received:	1/22/98
Date Prepared:	1/26/98
Date Analyzed:	1/26/98
Dilution Factor	1

TCLP Mercury by CVAA - USEPA Method 7470

Analyte	Result (mg/L)	PQL	Flags
Mercury	ND	0.002	

Hydrometrics, Inc.

CHAIN OF CUSTODY RECORD

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO.	PROJECT NAME
700	Marine View Drive Widening

SAMPLERS: *(Signature)*

P.O. 7319

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As	Total Pb	TPH EPA 418.1	PCBs	TCLP - As, Pb, Cd, Cr, Hg, Se, Ag		REMARKS
124-1	1-22-98	1200	✓		EUT-9801-500	4	✓	✓	✓	✓	✓		
↓2	1-22-98	1205	✓		EUT-9801-501	4	✓	✓	✓	✓	✓		ICP MS.

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
[signature]	1/22/98 1445				
Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
		[signature]	1/22/98 1445		

Split Samples:
[] Accepted [] Declined

395/34
03/1

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

October 13, 1997

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 2
To Tom Aldrich	From D. Nazy
Co. ASARCO	Co. Ecology
Dept.	Phone # 649-7258
Fax # (253) 756-0250	Fax # 649-7098

Mr. Tom Aldrich
ASARCO Incorporated
P.O. Box 1677
Tacoma, WA 98401

Re: Request for Authorization for Stockpile Subgrade Backfill Material
Puget Sound Energy Natural Gas Pipeline Installation
Everett Smelter Site

Dear Tom:

Ecology has reviewed your October 10th letter requesting approval to transport soil generated on the Everett Smelter Site to Ruston for use as subgrade backfill below the site-wide cap at the Asarco Smelter Site. The soil will be generated during a Puget Sound Energy project being conducted along East Marine View Drive in Everett.

Ecology has also received a verbal request from Puget Sound Energy to grant approval to this proposal. In addition, Ecology has received a copy of a letter from EPA to Asarco, dated October 9th, providing EPA's concurrence with Asarco's request.

Based on the information provided, the proposal appears to be consistent with remedial actions required by Enforcement Order DE 97TC-N119. Specifically, the proposed action is consistent with the objectives of the Expanded Soil Disposal Program. However, because Ecology has not yet approved a work plan for this task, this proposal is considered to be an independent remedial action by Asarco.

Because of the timing of the project, the consistency with the Enforcement Order, and the agreement that has been reached between Asarco, Puget Sound Energy, and EPA, Ecology does not object to this request.

Please keep me informed of the status and progress of this project. This project could be used as a case study for the Expanded Soil Disposal Program and may be useful in defining how best to design that program.

Thank you for your assistance in this matter. Ecology appreciates Asarco's willingness and initiative to work with the parties involved to address this issue in a timely and appropriate manner.

Should you have any questions or comments, please do not hesitate to call me at (425) 649-7258.

Sincerely,

Dave Nazy

Dave Nazy
Project Manager
Toxics Cleanup Program

cc: Dave Davis, City of Everett
Christoph Enderlein, Snohomish County PUD
Barry Lombard, Puget Sound Energy
Rick Reininger, Snohomish County General Services
Kevin Rochlin, Region 10 EPA
Bill Westwood, GTE Northwest
Mary Sue Wilson, AGO
Mike Young, Snohomish Health District

670/3

ASARCO

Thomas L. Aldrich
Site Manager
Tacoma Plant

October 10, 1997

Mr. Dave Nazy, Site Manager
Toxics Cleanup Program
Department of Ecology
3190 160th Ave SE
Bellevue, WA 98008

RE: Request for Authorization for Stockpile Subgrade Backfill Material
Puget Sound Energy Natural Gas Pipeline Installation
Everett Smelter Site

Dear Dave:

As you know, Puget Sound Energy (PSE) and Asarco have been working together to manage excess soil attributable to PSE's installation of a natural gas pipeline on the west side of East Marine View Drive in Everett. The excavated material will be transported to the Tacoma Smelter for use as subgrade backfill below the site-wide cap. Earlier this week I sent you a copy of Asarco's request to EPA to accept this material at the Tacoma Smelter. EPA has approved this request; a copy of EPA's letter was sent to you via facsimile today.

EPA's approval is contingent upon Ecology's authorization to proceed. Asarco requests Ecology's authorization to proceed, as described in Asarco's request to EPA. If you have any questions, please call me.

Very truly yours,

Thomas L. Aldrich
Site Manager

cc: Kevin Rochlin, Region 10 EPA
Gary Reid, Puget Sound Energy

ASARCO Incorporated P.O. Box 1677 Tacoma, WA 98401 (206) 756-0201 Fax: (206) 756-0250
INFORMATION CENTER (206) 756-5436 FAX (206) 756-7414

Mike Young, Snohomish Health District
Dave Davis, City of Everett
Catherine Carpenter, NECO
Anne Robison, NECO
Miji Ryan, Northwest Everett Neighborhood Association
Greg Glass, NECO
Alison Freeman-Gleason, Heller Ehrman, White & McAuliffe
Steve Werner, McCulley Frick and Gilman
Dave Nation, Hydrometrics

APPENDIX C
DOCUMENTATION OF MATERIAL DISPOSAL

Wilder Construction Company

HIRED

Truck Report

OWNER _____ Date _____

H 35663

Start ____ am pm Stop ____ am pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 63099

OWNER _____ Date _____

Start _____ am/pm Stop _____ am/pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 56326

OWNER [illegible] Date 6-2?-?6

Truck # [illegible]
Trailer # [illegible]

Start [illegible] am/pm Stop 12 30 am/pm Lunch —

Total Hours Solo ____ Trk & Trl 4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~	TT	1	4		
				825					

Approved: [illegible] 12 30 Driver: [illegible signature]

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 76656

OWNER GOBIN HAULING Date [illegible]

Truck # 64

Trailer #

Start [illegible] am pm Stop 12[illegible] am (pm) Lunch

Solo / Trk & Trl (circled)

Total Hours 4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~ 825	TT	1	4		

Approved: [illegible signature] Driver: [illegible signature]

CUSTOMER COPY

2·00 +
2·00 +
1·00 +
1·00 +
1·00 +
1·00 +
2·00 +
2·00 +
1·00 +
2·00 +
1·00 +
1·00 +
1·00 +
1·00 +
2·00 +
1·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
58·00 x
034·· ·····
58·00 +

1·00 +
58·00 +
1·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
2·00 +
1·00 +
1·00 +
1·00 +
1·00 +
2·00 +
2·00 +
015·······
88·00 +

88·00 x
·· +

88· x Loads @ 19.00 cy/Load
19.

Gives (1672.60) cy/s

Wilder Construction Company

HIRED

Truck Report

H 63564

OWNER _____ Date _____

Start _____ am/pm Stop _____ am/pm Lunch _____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____ | _____

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				[illegible]					
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 75497

OWNER Spring Crest Nursery Date June 26 1998

INV # 20003

Truck # 12

Start 0730 (am) pm Stop 1600 am (pm) Lunch All

Trailer # 20

	Solo	Trk & Tri
Total Hours		7.5

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Tri (TT)	No. Loads	Hours	Truck Rate	Amount
Dirt	Pineview Dr. Everett Wash	The Smelter	111096	885	TT	2	7.5	75.00	

Approved: [signature] Driver: Henry J Hudkins

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 68432

OWNER _____ Date _____

Start _____ am/pm Stop _____ am/pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 76436

OWNER [illegible] Date [illegible]

Truck # [illegible]

Trailer # [illegible]

Start 1 am/pm Stop 1:30 am/pm Lunch

	Solo	Trk & Trl
Total Hours		7 1/2

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~	TT	2	7 1/2	75–	
				825					

Approved: [illegible] Driver: [illegible]

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 59788

OWNER _____ Date _____

Start _____ am/pm Stop _____ am/pm Lunch _____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 58794

OWNER [illegible] Date [illegible]

Truck # [illegible]

Start [illegible] am/pm Stop [illegible] am/pm Lunch [illegible]

Trailer # [illegible]

Total Hours Solo ____ Trk & Trl 7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~ 825	TT	2	7	[illegible]	

Approved: [illegible] Driver: [illegible]

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 63974

OWNER _____ Date _____

Start ____ am/pm Stop ____ am/pm Lunch ____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
						1			
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 68458

OWNER _____ Date _____

Start _____ am pm Stop _____ am pm Lunch _____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				~~[illegible]~~			7		
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 76434

OWNER _____ Date _____

Start 9:15 am/pm Stop 12:15 am/pm Lunch _____

Truck # 8

Trailer # 8

Total Hours _____ Solo _____ Trk & Trl 3.0

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Export	Wilder	Tioga	1196	825	T/T	1	3.0	75	

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 76435

OWNER [illegible] Date 6/16/05

Truck # 1

Trailer # 7

Start 1:15 am/pm Stop 12:15 [4315] am/pm Lunch

Total Hours — Solo: — Trk & Trl: 3

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~ 825	TT	1	3	[illegible]	

Approved: ______ Driver: [illegible]

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 75664

OWNER _____ Date _____

Start ___ am/pm Stop ___ am/pm Lunch ___

Truck # ___

Trailer # ___

	Solo	Trk & Trl
Total Hours		

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				[redacted]	TT	2			
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 63563

OWNER _____ Date _____

Start _____ am / pm Stop 1:45 am / pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 57751

OWNER John's Trucking Date 6-26-98

Truck # 3

Trailer #

Start 1:00 am/pm Stop [illegible] am/pm (pm circled) Lunch —

Total Hours Solo — Trk & Trl 7.5

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Waste	[illegible]	To [illegible]	[illegible]	825					

Approved: [signature] Driver: [signature]

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 63562

OWNER _____ Date _____

Start _____ am/pm Stop _____ am/pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		1

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				[redacted]		1	1		
11				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 63561

OWNER Pierce Bros. Date 6-14-98

Start 7:30 pm Stop 2:30 pm Lunch 0

Truck # 2

Trailer # 2

Total Hours — Solo | Trk & Trl: 7 1/4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
WASTE	MARINE VIEW DR	TACOMA	MDWL		TT		7 1/2		643.75
"	"	"	"		"		"		

Approved: Mark Wilder

Driver: Andy Pierce

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75993

OWNER _____ Date _____

Truck # _____

Start ____ am / pm Stop ____ am / pm Lunch _____

Trailer # _____

Total Hours	Solo	Trk & Trl
		7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Spoils	[illegible]	[illegible]	[illegible]	825	[illegible]	2	7		

Approved: _____ Driver: _____

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75541

OWNER _____ Date _____

Start 7:30 am pm Stop 3:30 am pm Lunch _____

Truck # _____

Trailer # _____

Total Hours _____ Solo | Trk & Trl 7½

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount

Approved: _____ Driver: _____

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75524

OWNER: C-Wolf [illegible] Date: [illegible]

Start: 7:30 am/pm Stop: 3:00 am/pm Lunch: None

Truck #: [illegible]

Trailer #: [illegible]

Total Hours: Solo ____ Trk & Trl 7½

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Dirt	Smith	Tacoma	[illegible]	825	T+T	12	7½		

Approved: [illegible signature]

Driver: [illegible signature]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 63902

OWNER _____ Date _____

Truck # _____

Start _____ am/pm Stop _____ am/pm Lunch _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____ | _____

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825					

Approved: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 63926

OWNER [illegible] Date 6/[illegible]/08

Truck # 304

Start 8:15 (am) pm Stop 12:[illegible] am (pm) Lunch No

Trailer # 4[illegible]2

Solo | Trk & Trl: X

Total Hours

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
LKE	[illegible] VIELD[illegible]	TACOMA	[illegible]-71	[illegible] 825	(TT)	1	4 1/4		

Driver: [illegible] RTS B/L 01851

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 77118

OWNER _____ Date _____

Start _____ am pm Stop _____ am pm Lunch _____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

HIRED

Truck Report

H 77119

OWNER _____ Date 1

Start ____ am/pm Stop ____ am/pm Lunch ____

Truck # 13

Trailer # 13

Total Hours ____ Solo ____ Trk & Trl 7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				[redacted]			7		
				525					

Approved: _____ Driver: _____

CUSTOMER COPY

Wilder Construction Company

WILDER

Truck Report

W 44900

Driver Name Wade Dills Emp. # 3357 Date 6-18-96

Start 7:00 am Stop 6:00 pm Lunch 0

Driver Hours Reg. 8 / O.T. 3

Truck # 206 Trailer(s) # 5314-5228

Material Description	From	To	Job No.	Item No.	Craft Code	Trk or Trk/Trl	Load Size	No. Loads	Hours
Dirt	Mtn view Dr	Tacoma Smelter	M096	~~800~~ 825		T+T	31 yds	2	7
Set up	Brakes on	trailer	E321	~~8220~~	OL				①
Mcb	1321 52nd	Jim Cr	1984	001	4166	T+T	31 yds	1	3

Approved: [signature]

Driver Signature: Wade Dills

DRIVER COPY

Wilder Construction Company

WILDER

Truck Report

W 38802

Driver Name: Mike Marion Emp. # 1894 Date 6-13-95

Truck # 2051

Start 6:30 am/pm Stop 4:30 am/pm (pm circled) Lunch [illegible]

Driver Hours Reg. 8 O.T. 2

Trailer(s) # [illegible]

Material Description	From	To	Job No.	Item No.	Craft Code	Trk or Trk/Trl	Load Size	No. Loads	Hours
[illegible]	[illegible]	[illegible]	11036	825		T/T	yds / ton	2	[illegible]
[illegible]	[illegible]	[illegible]	M1911	665		T	yds / ton		[illegible]
							yds / ton		
							yds / ton		
							yds / ton		
							yds / ton		
							yds / ton		
							yds / ton		
							yds / ton		
							yds / ton		
							yds / ton		

Approved: [illegible signature]

Driver Signature: Mike Marion

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 61478

OWNER _____ Date _____

Start _____ am pm Stop _____ am pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		1

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825		1	1		

Approved: _____ Driver: _____

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75495

OWNER _____ Date _____

Start ____ am/pm Stop ____ am/pm Lunch _____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____ | 1/

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				825	T	1			

Approved: _____ Driver: _____

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75661

OWNER _____ Date _____

Start ____ am/pm Stop ____ am/pm Lunch _____

Truck # _____

Trailer # _____

Total Hours _____ Solo _____ Trk & Trl 4.0

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
							4		
				125					

Approved: _____ Driver: _____

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 76208

OWNER Spring Brook Nursery Date 6-18-98

INV- 19804

Start 0830 am pm Stop 1230 am pm Lunch [redacted]

Truck # 11

Trailer # 11

	Solo	Trk & Tri
Total Hours		4 hr

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Tri (TT)	No. Loads	Hours	Truck Rate	Amount
	[redacted]		M096 825		T T	1	4hr	75.00	[redacted]
DIRT	EVERETT WA	TACOMA WA	825						
	MARINE VIEW DR								

Approved: _____ Driver: Henry Mulder

FILE COPY

Wilder Construction Company HIRED

Truck Report

H 69449

OWNER Guzman's Hauling Date 6-18-98

Start 6:30 am Stop ____ am/pm Lunch 0

Truck # 6-2

Trailer # 6-2

Total Hours ____ Solo | Trk & Trl

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Dirt	[illegible]	[illegible]	mo 16	825	T&T	2	7	80	
[illegible]	" "	[illegible]	mo 16	016A	T&T	1	1	75	

Approved: ____ Driver: Tony [illegible] 1827

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 76427

OWNER GOBIN HAULING Date 6/18/96

Truck # 64

Start 6:40 (am) pm Stop 2:40 am (pm) Lunch ______

Trailer # ______

Solo ______ (Trk & Trl)

Total Hours 8

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
EXPORT	ASSOCIATED CONCRETE	TACOMA SMELTER	MO96	~~832~~	T+T	2	7		
				(825)	"	1	1		
EXPORT	"	ASSOCIATED S. CONCRETE		(064)					

Approved: ______

Driver: [signature]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 76832

OWNER [illegible] Date [illegible]

Start [illegible] am pm Stop [illegible] am pm Lunch [illegible]

Truck # [illegible]

Trailer # [illegible]

Total Hours	Solo	Trk & Trl
		3.5

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	825	TT	1	3.5	75	

Approved: [illegible]

Driver: [illegible]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 76428

OWNER [illegible] Date 6-1? 9?

Truck # 6 Trailer # 0

Start 6 10 am/pm Stop ____ am/pm Lunch ____

Total Hours: Solo ____ Trk & Trl 8

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	ALBERS[illegible]	[illegible]	11376	825	Y	2	7		
	BREN[illegible]	[illegible]							
[illegible]	" "	ABS [illegible]	11376	0116A		1	1		
		[illegible]							

Approved: ____ 1337

Driver: [illegible]

FILE COPY

ier Construction Company

HIRED

Truck Report

H 75857

[illegible] Date 6-18-98

Truck # 11

Trailer # 11

Start [illegible] am pm Stop 2:[illegible] am pm Lunch ______

Solo | Trk & Trl
Total Hours ______ | 4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible] Smelter	11096	~~[illegible]~~ 826	TT	1	4	7[illegible]	
					# [illegible]5[illegible]96				

Approved: ______ Driver: [signature]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75235

OWNER _____ Date _____

Start ____ am/pm Stop ____ am/pm Lunch ____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		1/

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				~~875~~ 875		1			

Approved: _____ Driver: _____

FILE COPY

Wilde[illegible]onstruction Company

HIRED

Truck Report

H 63973

OWNER [illegible] Date 6[illegible]

Start [illegible] am pm Stop [illegible] am pm Lunch [illegible]

Truck # [illegible]

Trailer # [illegible]

	Solo	Trk & Trl
Total Hours		

Material D[illegible]	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
	[illegible]	[illegible]	[illegible]	[illegible]	T	1	[illegible]		
				4.25					

Approved: [illegible] Driver: [illegible]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75848

OWNER [illegible]　Date [illegible]

Truck # [illegible]

Trailer # [illegible]

Start 9:00 ~~am~~ pm　Stop 12 am (pm)　Lunch ~~[illegible]~~ NOT APPLY

Total Hours　Solo ~~[illegible]~~　Trk & Trl 4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	EVERETT	[illegible]	NU76	825		1	4		

Approved: ______________　Driver: ______________

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75992

OWNER PLT

Date 6-18-18

Truck # 241

Trailer # 570

Start 730 am Stop 3 20 pm Lunch [illegible]

Total Hours — Solo: [illegible] | Trk & Trl: 7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Hiz Expert	Aly [illegible]	[illegible]	M096	[illegible]	T+T	2	7		
↓					[illegible]				

Approved: [signature]

Driver: [signature]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75849

OWNER _____ Date _____

Start ____ am/pm Stop ____ am/pm Lunch _____

Truck # _____

Trailer # _____

Solo | Trk & Trl

Total Hours _____ | L

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
				505		1	4		

Approved: _____ Driver: _____

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 63798

OWNER [illegible] Date [illegible]

Start [illegible] am pm Stop [illegible] am pm Lunch _____

Truck # [illegible]

Trailer # _____

Solo _____ Trk & Trl 7.0

Total Hours

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~ 205	TT	2	7.0		

Approved: [illegible] Driver: [illegible]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75984

OWNER PENNY LLC Date 6-10-98

PLT INVOICE # 7016

Truck # P-18

Start 715 am/pm Stop 230 am/pm Lunch —

Trailer # T-53

	Solo	Trk & Trl
Total Hours	0	7 1/4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
HAZ.	Airport	TAC.	M096	025	TT	1			
EXPRT	Bridge	SMELTER	M096	025	TT	1	7 1/4		

Approved: [illegible]

Driver: [signature]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75784

OWNER [illegible] Date [illegible]

Start 7 (am) pm Stop [illegible] am pm Lunch [illegible]

Truck # [illegible]

Trailer # 411

Total Hours: Solo [ ] Trk & Trl 7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Dirt	[illegible]	[illegible]	[illegible]	~~800~~ 825	T+T	2	7		

Approved: [illegible]

Driver: [illegible]

FILE COPY

Vilder Construction Company

HIRED

Truck Report

H 75785

OWNER Riverside Date 6.13.95

Truck # RS-28

Start 200 (am) pm Stop 200 am (pm) Lunch Ø Trailer # 40

Total Hours Solo | Trk & Trl 7

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Export	Port of Everett	Terminal smith	MC 96	~~[illegible]~~ 825	TT	2	7		

Approved: ______ Driver: [signature]

FILE COPY

P

Wilder Construction Company

HIRED

Truck Report

H 58790

OWNER Riverside S&G   Date ?/18/95

Truck # 27

Start 200 am pm Stop 145 am pm Lunch Ø   Trailer # 38

Total Hours Solo ____ Trk & Trl 6 3/4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~ 825	T/T	2	6 3/4	[illegible]	[illegible]

Approved: [illegible signature]   Driver: [illegible signature]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 59787

OWNER [illegible] Date [illegible]

Start [illegible] am pm Stop [illegible] am pm Lunch [illegible]

Truck # [illegible]

Trailer # [illegible]

Total Hours Solo ___ Trk & Trl [illegible]

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	[illegible]	~~[illegible]~~ 425	[illegible]	2	[illegible]		

Approved: [illegible] Driver: [illegible]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 75919

OWNER [illegible] Date 6-18-18

Start 6:30 am pm Stop 1:00 am pm Lunch 17

Truck # 6-6

Trailer # T 6

	Solo	Trk & Trl
Total Hours		6 2

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
[illegible]	[illegible]	[illegible]	11071	425	TT	2	6 2		

Approved: [illegible]

Driver: [illegible]

FILE COPY

Wilder Construction Company

HIRED

Truck Report

H 63828

OWNER _____ Date _____

Start 1:0 am pm Stop 1:45 am pm Lunch _____

Truck # _____

Trailer # _____

	Solo	Trk & Trl
Total Hours		6 1/2

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
					T	2	6 1/2		

Approved: _____ Driver: _____

FILE COPY

'ilder Construction Company

HIRED

Truck Report

H 74772

OWNER [illegible] Date 6/18/98

Truck # 29

Trailer # 29

Start 7 1/5 am pm Stop 3 am (pm) Lunch 0

Total Hours Solo ___ Trk & Trl 7 1/4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
Top Soil	Emmett Marine Dr	Tacoma Smelter	M096	825	TT	2	7 1/4		

Approved: [illegible] Driver: Jack Sherman

FILE COPY

ıder Construction Company

HIRED

Truck Report
H 63094

OWNER: Pacific Western Inc. Date: 6-18-98

Truck #: 4
Trailer #: T-4

Start: 7:30 (am) Stop: 2:45 pm Lunch: NO

Total Hours — Solo: ____ Trk & Trl: 7 1/4

Material Description	From	To	Job No.	Item No.	Solo (T) or Trk/Trl (TT)	No. Loads	Hours	Truck Rate	Amount
WASTE	MERIDIAN [illegible]	TACOMA	H096	825	TT	2	7 1/4	73 [illegible]	
	Pacific Western's	Dumping # 005							

Approved: [signature] Driver: [signature]

FILE COPY

APPENDIX D
DEED RESTRICTION

RESTRICTIVE COVENANT

City of Everett
Legion Memorial Golf Course
144 West Marine View Drive
Everett, WA 98201

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by the City of Everett ("City"), a municipal corporation, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns ("Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document: *East Marine View Drive Widening and Legion Memorial Golf Course Improvement Independent Remedial Action Report,* prepared for the City by Hydrometrics, Inc., dated December 1998. This document is on file at Ecology's Northwest Regional Office ("NWRO").

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of arsenic which exceed the Model Toxics Control Act Method A residential cleanup level for soil established under WAC 173-340-740 ("contaminated soil").

The undersigned, the City of Everett is the fee owner of real property ("Property") in the County of Snohomish, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described in Attachment A of this Restrictive Covenant and made a part hereof by reference.

The City makes the following declaration as to limitations and restrictions to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1. A portion of the Property contains contaminated soil located under the parking lot and clubhouse facilities. The Owner shall not alter, modify, or remove the existing structures in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology. The Owner may conduct parking lot and building maintenance or expansion that maintains or increases the containment function of the structures.

Section 2. The Owner shall not modify areas of the Property on which residual contaminated soil is located and capped by sand or turf, except as follows:

a. Any future redesign and reconfiguration of entire holes or overall renovation of the golf course that disturbs contaminated soil on the Property shall follow the work plan summarized on Table 2 of, and further described in, the *East Marine View Drive Widening and Legion Memorial Golf Course Improvement Independent Remedial Action Report.* The City may request Ecology's review and concurrence on changes, if any, in the work plan.

b. As part of normal operations, improvements, and maintenance of the golf facility, the Owner shall maintain and implement a set of protective procedures to be used in maintaining any areas of the Property where contaminated soil remains (hereafter "Golf Course Maintenance Program"). The golf course maintenance program shall include worker training, use of protective

clothing, isolation of temporarily stockpiled soils with a plastic barrier, backfilling of any new utility trenches with clean material, and proper management of any soils that require removal off-site.

c. The Golf Course Maintenance Program shall also include maintenance of the integrity of the capped areas, including: (i) the maintenance of not less than four inches of clean sand or soil on fairways, tees, and greens; (ii) turf and landscaping in areas of the rough that are not capped by sand or other features (e.g., impervious surfaces, ponds); (iii) the periodic topdressing and maintenance of turf on Fairway No. 12; and (iv) procedures for construction or maintenance of golf course or other utilities or facilities that may be located on or traverse the Property.

d. Except for the Golf Course Maintenance Program, any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.

Section 3. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action. (Section 5 below governs leases.)

Section 5. The Owner must restrict leases for uses of the Property other than the clubhouse or pro shop, if any, to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

_____

Edward D. Hansen, Mayor
CITY OF EVERETT

_____

[DATE SIGNED]

[NOTE: The Property Owner must have this covenant notarized; Att. A to be added.]

RESTRICTIVE COVENANT earlier draft

City of Everett
Legion Memorial Golf Course
144 West Marine View Drive
Everett, WA 98201

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by the City of Everett ("City"), a municipal corporation, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns ("Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document: *East Marine View Drive Widening and Legion Memorial Golf Course Improvement Independent Remedial Action Report,* prepared for the City by Hydrometrics, Inc., dated December 1998. This document is on file at Ecology's Northwest Regional Office ("NWRO").

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of arsenic which exceed the Model Toxics Control Act Method A residential cleanup level for soil established under WAC 173-340-740 ("contaminated soil").

The undersigned, the City of Everett is the fee owner of real property ("Property") in the County of Snohomish, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described in Attachment A of this Restrictive Covenant and made a part hereof by reference.

The City makes the following declaration as to limitations and restrictions to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1. A portion of the Property contains contaminated soil located under the parking lot and clubhouse facilities. The Owner shall not alter, modify, or remove the existing structures in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology. The Owner may conduct parking lot and building maintenance or expansion that maintains or increases the containment function of the structures.

Section 2. The Owner shall not modify areas of the Property on which residual contaminated soil is located and capped by sand or turf, except as follows:

a. Any future redesign and reconfiguration of entire holes or overall renovation of the golf course that disturbs contaminated soil on the Property shall follow the work plan summarized on Table 2 of, and further described in, the *East Marine View Drive Widening and Legion Memorial Golf Course Improvement Independent Remedial Action Report.* The City may request Ecology's review and concurrence on changes, if any, in the work plan.

b. As part of normal operations, improvements, and maintenance of the golf facility, the Owner shall maintain and implement a set of protective procedures to be used in maintaining any areas of the Property where contaminated soil remains (hereafter "Golf Course Maintenance Program"). The golf course maintenance program shall include worker training, use of protective

clothing, isolation of temporarily stockpiled soils with a plastic barrier, backfilling of any new utility trenches with clean material, and proper management of any soils that require removal off-site.

c. The Golf Course Maintenance Program shall also include maintenance of the integrity of the capped areas, including: (i) the maintenance of not less than four inches of clean sand or soil on fairways, tees, and greens; (ii) turf and landscaping in areas of the rough that are not capped by sand or other features (e.g., impervious surfaces, ponds); and (iii) the periodic topdressing and maintenance of turf on Fairway No. 12.

d. Except for the Golf Course Maintenance Program, any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.

Section 3. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5. The Owner must restrict leases for uses of the Property other than the clubhouse or pro shop, if any, to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

_____

Edward D. Hansen, Mayor
CITY OF EVERETT

_____

[DATE SIGNED]

[NOTE: The Property Owner must have this Restrictive Covenant notarized.]
EV57.DOC/12/3/98PM

APPENDIX E
LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS FOR COMPLIANCE MONITORING

AIR MONITORING LABORATORY REPORTS FOR EAST MARINE VIEW DRIVE

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	MVD-01
Lab ID:	67190-01
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/10/97
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	0.11	0.1	
Lead	0.57	0.05	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	MVD-02
Lab ID:	67190-02
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/10/97
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	MVD-03
Lab ID:	67190-03
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/10/97
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.: 0700

PROJECT NAME: Marine View Drive Widening

SAMPLERS: (Signature) [signature]

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As	Total Pb	REMARKS
7190-1	9/3/97	1630		✓	MVD-01	1	X	X	D.L. < 0.5 µg/filter
2	"	"		✓	MVD-02	1	X	X	D.L. < 0.1 µg/ "
3	"	"		✓	MVD-03	1	X	X	" " "
	9/3	1800	✓		DSP-2	1	✓	✓	Soil 3 day turn
	"	"	✓		DSP-3	1	✓	✓	
	"	"	✓		DSP-4	1	✓	✓	
	"	"	✓		DSP-5	1	✓	✓	

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	9/4/97 1355				

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
		Mary Cutter	9/4/97 2:00	PO #7020 T

Soil Samples:

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	MVD-06
Lab ID:	67406-03
Date Received:	9/15/97
Date Prepared:	9/15/97
Date Analyzed:	9/15/97
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	0.1	0.1	
Lead	4.5	0.05	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	MVD-04
Lab ID:	67406-01
Date Received:	9/15/97
Date Prepared:	9/15/97
Date Analyzed:	9/15/97
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	MVD-05
Lab ID:	67406-02
Date Received:	9/15/97
Date Prepared:	9/15/97
Date Analyzed:	9/15/97
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
0700	Marine View Drive Widening

SAMPLERS: (Signature) [signature]

Ken Wilson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As	Total Pb				REMARKS
9406-1	9/10/97	1630		✓	MVD-04	1	✓					D.L. = < 0.1 ug/Filter
2	"	"		✓	MVD-05	1	✓					"
3	"	"		✓	MVD-06	1	✓	✓				D.L. = < 0.5 ug/Filter

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	9/15/97 1005				
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		Mary Cutter	9/15/97 10:05	[initials]	

Split Samples:

91

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	0700-05-03
Lab ID:	72550-03
Date Received:	5/6/98
Date Prepared:	5/8/98
Date Analyzed:	5/8/98
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	
Lead	0.93	0.05	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	0700-05-01
Lab ID:	72550-01
Date Received:	5/6/98
Date Prepared:	5/8/98
Date Analyzed:	5/8/98
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	
Lead	1.1	0.05	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	0700-05-02
Lab ID:	72550-02
Date Received:	5/6/98
Date Prepared:	5/8/98
Date Analyzed:	5/8/98
Dilution Factor	1

Metals by ICP-MS - USEPA Method 200.8

Analyte	Result (ug - total)	PQL	Flags
Arsenic	ND	0.1	
Lead	0.99	0.05	

CHAIN OF CUSTODY RECORD

Hydrometrics, Inc. 72550 1/2

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO.: 0700

PROJECT NAME: Marine View Drive Widening

SAMPLERS: (Signature)

REMARKS: PO ~~7889T~~ 7891T
Ken Wilson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As	Total Pb				REMARKS
~~0700-05-~~	5/4/98	1700		✓	0700-05-01	1	✓	✓				Det Limit 0.5 µg/Filter
	5/4/98	1700		✓	0700-05-02	1	✓	✓				" 0.1 µg/Filter
	5/4/98	1700		✓	0700-05-03	1	✓	✓				" 0.1 µg/Filter

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	5/4/98 1605				

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
		M. Holzman	5/4/98 1605	

Split Samples:
[] Accepted [] Declined

AIR MONITORING LABORATORY REPORTS FOR LEGION MEMORIAL GOLF COURSE

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Hydrometrics, Inc. Date: June 17, 1997

Report On: Analysis of Air Filters Report No.: 65411

IDENTIFICATION:
Samples received on 06-16-97
Project: 0729 Golf Course Reconstruction
P.O. No. 6414T

ANALYSIS:

Lab Sample No. 65411-1 Client ID: 729-06-01

ICP-MS Metals Per EPA Method 6020
Date Analyzed: 6-16-97
Units: ug

Parameter	Result	PQL
Arsenic	ND	5.0
Lead	ND	5.0

Lab Sample No. 65411-2 Client ID: 729-06-02

ICP-MS Metals Per EPA Method 6020
Date Analyzed: 6-16-97
Units: ug

Parameter	Result	PQL
Arsenic	ND	0.2
Lead	0.9	0.2

ND - Not Detected
PQL - Practical Quantitation Limit

Ken Wilson

Hydrometrics, Inc. 65411 9/3

CHAIN OF CUSTODY RECORD

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO.	PROJECT NAME
0729	Golf Course Reconstruction

SAMPLERS: *(Signature)*

P.O # 64147

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	As, Pb ICP-MS	As, Pb ICP					REMARKS
	6/14/97	1730		✓	729-06-01	1		✓					RUSH
	6/14/97	1730		✓	729-06-02	1	✓						

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
	6/16/97 10:25				
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
		DGiang	6/16/97 1033		

Spill Samples:

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Hydrometrics, Inc. Date: June 25, 1997

Report On: Analysis of Filter Report No.: 65590

IDENTIFICATION:

Sample received on 06-20-97
Project: 0729 Everett Golf Course Recon.

ANALYSIS:

Lab Sample No. 65590-1 Client ID: 729-06-03

ICP-MS Metals Per EPA Method 6020
Date Analyzed: 6-24-97
Units: ug

Parameter	Result	PQL
Arsenic	ND	0.1

ND - Not Detected
PQL - Practical Quantitation Limit

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
0729	Everett Golf Course Recon.

SAMPLERS: *(Signature)* Ken Wilson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	As	REMARKS
5590	6/16/97	17		✓	729-06-03	1	✓	ICP-MS D.L. = <0.13 µg

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
	6/20/97 1415				
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
		Mary Coates	6/20/97 2:20	PO 64122 T	

Split Samples:

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/9/97
CCIL JOB #: 706111
CCIL SAMPLE #: 1
DATE RECEIVED: 6/28/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-01 PERSONAL 6/27/97

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		7/8/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		7/8/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CVG

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/9/97
CCIL JOB #: 706111
CCIL SAMPLE #: 2
DATE RECEIVED: 6/28/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-02 ENVIR 6/27/97

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		7/8/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	LMGC

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (DL 45)	Total Pb (DL 45)	Total As (DL 1)				REMARKS
	6/27/01			✓	LMGC-01	1	✓	✓					Personal
	6/27			✓	LMGC-02	1			✓				Envir

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward A. Phelps	6-27-01 1025	CCNL			
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

Split Samples:
☐ Accepted ☐ Declined

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/9/97
CCIL JOB #: 707010
CCIL SAMPLE #: 2
DATE RECEIVED: 7/3/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-03 PERSONAL 7/2/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL**	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		7/8/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		7/8/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/9/97
CCIL JOB #: 707010
CCIL SAMPLE #: 1
DATE RECEIVED: 7/3/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-04 ENVIR 7/2/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		7/8/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	Total As (DL < 1)	Total As (DL < 5)	Total Pb (DL < 5)	REMARKS
	LMGC					

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (DL < 1)	Total As (DL < 5)	Total Pb (DL < 5)	REMARKS
	7-2-97	1700		✓	LMGC-04	1	✓			Envr.
	7-2-97	1700		✓	LMGC-03	1				Personal

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward M. Phelps	7/3/97 8:30AM	[illegible]			
Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
				Report to Ken Wilson @ Ahtna	

Split Samples:
[] Accepted [] Declined

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/25/97
CCIL JOB #: 707034
CCIL SAMPLE #: 1
DATE RECEIVED: 7/14/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-05 ENVIR 7/11/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		7/21/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	LMGC

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TOTAL As (D.L. < .1)						REMARKS
	7/11/97	1700		✓	LMGC = #05	1	✓						ENVIR.

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward A. Phelps	7/14/97 9:00 Am	[illegible]			

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*

Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks
				REPORT TO KEN WILSON @ ABOVE

Split Samples:
[] Accepted [] Declined ______
Signature

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/25/97
CCIL JOB #: 707048
CCIL SAMPLE #: 2
DATE RECEIVED: 7/17/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-07 PERSONAL 7/16/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		7/21/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		7/21/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRT

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 7/25/97
CCIL JOB #: 707048
CCIL SAMPLE #: 1
DATE RECEIVED: 7/17/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-06 ENVIR 7/16/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		7/21/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	LMGC

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (DL<.1)	Total As (DL<.5)	Total Pb (DL<.5)				REMARKS
	7/16/97	1700		✓	LMGC-06	1	✓						ENV.
	7/16/97	1700		✓	LMGC-07	1		✓	✓				PERSONAL

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward A Phelps	7/17/97 8:05 am	[signature] ALCCIAL			

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*

Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks
				Report to Ken Wilson @ ABOVE

Split Samples:
[] Accepted [] Declined

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/8/97
CCIL JOB #: 707078
CCIL SAMPLE #: 2
DATE RECEIVED: 7/25/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-09 PERSONAL 7/24/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		8/7/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		8/7/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/8/97
CCIL JOB #: 707078
CCIL SAMPLE #: 1
DATE RECEIVED: 7/25/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-08 ENV 7/24/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		8/7/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CJG

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (D.L. 4.1)	Total As (D.L. 4.5)	Total Pb (D.L. 4.5)				REMARKS
	7/24/97	1700		✓	LMGC-08	1	✓						ENV.
	7/24	1700		✓	LMGC-09	1		✓	✓				Personal

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
[signature]	7/24/97 8:20	[signature]			
Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
[signature]					
Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
				Report to Ken Wilson @ ABOVE	

Split Samples:
[ ] Accepted [ ] Declined

Signature

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/8/97
CCIL JOB #: 708008
CCIL SAMPLE #: 2
DATE RECEIVED: 8/4/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-11 PERSONAL 7/31/97

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		8/7/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		8/7/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/8/97
CCIL JOB #: 708008
CCIL SAMPLE #: 1
DATE RECEIVED: 8/4/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-10 ENV 7/31/97

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		8/7/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CIQ

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

CHAIN OF CUSTODY RECORD

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO. | PROJECT NAME

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (D.L. <.1)	Total As (D.L. <.5)	Total Pb (D.L. <.5)				REMARKS
	7-31-97			✓	LMGC - 10	1	✓						Enviro
	7-31-97			✓	LMGC - 11	1		✓	✓				Personnel

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
[signature]	8-4-97 11:45	[signature]			

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*

Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks
				Report to Ken Wilson @ ABOVE

Split Samples:
[] Accepted [] Declined ______ Signature

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/22/97
CCIL JOB #: 708023
CCIL SAMPLE #: 2
DATE RECEIVED: 7/8/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-13 PERSONAL 8/7/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		8/20/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		8/22/97	JLB

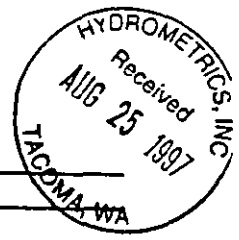
* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: C.V.C.

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.



CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/22/97
CCIL JOB #: 708023
CCIL SAMPLE #: 1
DATE RECEIVED: 7/8/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-12 ENVIRONMENTAL 8/7/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		8/20/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CJ

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	LMGC

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (D.L. 4.1)	Total As (D.L. 4.5)	Total Pb (D.L. 4.5)				REMARKS
	8/7/97	1700		✓	LMGC-12	1	✓						ENVIR.
	8/7	1700		✓	LMGC-13	1		✓	✓				PERSONNEL

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward A. Phelps	8/8/97 11:50AM	CCIA 8/8/97			
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks: Report to Ken Wilson @ [illegible]	

Split Samples:

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/22/97
CCIL JOB #: 708040
CCIL SAMPLE #: 2
DATE RECEIVED: 7/15/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-15 PERSONAL 8/14/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		8/20/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		8/22/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CH

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9050

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/22/97
CCIL JOB #: 708040
CCIL SAMPLE #: 1
DATE RECEIVED: 7/15/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-14 ENVIRONMENTAL 8/14/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		8/20/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St • Everett WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292 9050

CHAIN OF CUSTODY RECORD

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO.:

PROJECT NAME: LMGC

SAMPLERS: (Signature)

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (DL <.1)	Total As (DL <.5)	Total Pb (DL <.5)				REMARKS
	8/14/97	1200		✓	LMGC - 14	1	✓						ENV.
	8/14	1700		✓	LMGC - 15	1		✓	✓				PERSONAL

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Edward A. Phelps	8/15/97 8:30am	[signature]			
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
				Report to Ken Wilson (?) [illegible]	

Split Samples:

HYDROMETRICS [stamp] 1997 TACOMA, WA

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/25/97
CCIL JOB #: 708060
CCIL SAMPLE #: 2
DATE RECEIVED: 7/22/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-17 PERSONAL 8/21/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL**	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		8/25/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		8/25/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: 

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-0050

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 8/25/97
CCIL JOB #: 708060
CCIL SAMPLE #: 1
DATE RECEIVED: 7/22/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-16 ENVIRONMENTAL 8/21/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	0.2	UG/FILTER		8/25/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	LMGC

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	TOTAL AS (AL 4.1)	TOTAL AS (AL 4.5)	TOTAL PB (AL 4.5)	REMARKS
	8/21/97	1700		V	LMGC-16	1				ENV Personal
	8/21	1700		V	LMGC-17	1				

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward A. Phelps	8/22/97 8:45AM	CH CCIAL			
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks: Report to Ken Wilson @ ABOVE	

Split Samples:

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 9/3/97
CCIL JOB #: 708085
CCIL SAMPLE #: 2
DATE RECEIVED: 8/29/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-19 PERSONAL 8/28/97 1530

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		8/29/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		9/2/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St • Everett WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9050

CCI
ANALYTICAL
LABORATORIES, INC.

HYDROMETRICS, INC
Received
SEP 8 1997
TACOMA, WA

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 9/3/97
CCIL JOB #: 708085
CCIL SAMPLE #: 1
DATE RECEIVED: 8/29/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-18 ENVIRONMENTAL 8/28/97 1530

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL**	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		8/29/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: _____

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9059

Hydrometrics, Inc.

CHAIN OF CUSTODY RECORD

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO.	PROJECT NAME
	LMGC

SAMPLERS: *(Signature)*

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total AS (D.L. <.1)	Total AS (D.L. <.5)	Total Pb (D.L. <.5)				REMARKS
	8/28/9_	1530		✓	LMGC-18	1	✓						ENV.
	8/28	1530		✓	LMGC-19	1		✓	✓				PERSONAL
													2 DAY Rush

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Edward A. Phelps	8-29-9_ 0810	[illegible] CCIAL			
Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
				REPORT TO KEN WILSON [illegible]	

Split Samples:

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 9/9/97
CCIL JOB #: 709019
CCIL SAMPLE #: 2
DATE RECEIVED: 9/5/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-21 PERSONAL 9/4/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.5)	UG/FILTER		9/8/97	JLB
LEAD	EPA-7421	ND(<0.5)	UG/FILTER		9/8/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRB

3229 Pine St • Everett WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9050

CCI
ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: HYDROMETRICS, INC
950 PACIFIC AVENUE, SUITE 700
TACOMA, WA 98402

DATE: 9/9/97
CCIL JOB #: 709019
CCIL SAMPLE #: 1
DATE RECEIVED: 9/5/97
WDOE ACCREDITATION #: C142

CLIENT CONTACT: KEN WILSON

CLIENT PROJECT ID: LMGC
CLIENT SAMPLE ID: LMGC-20 ENVIRONMENTAL 9/4/97 1700

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
ARSENIC	EPA-7060	ND(<0.1)	UG/FILTER		9/8/97	JLB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CVD

3229 Pine St. • Everett, WA 98201 • 425 258-4548 • FAX 425 259-6289 • Seattle 206 292-9050

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.:

PROJECT NAME: LMGC

SAMPLERS: (Signature)

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As (D.L. <.1)	Total As (D.L. <.5)	Total Pb (DL <.5)				REMARKS
	9/4/97	1700		✓	LMGC - # 20	1	✓						ENV
	9/4	1700		✓	LMGC - # 21	1		✓	✓				PERSONAL
													Two Day TAT. Tuesday Am.

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Edward A. Phelps	9/5/97 9:25 Am	R. A. Bryan CCEIK 9/5/97 9:25			

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
				REPORT TO KEN Wilson @ [illegible]

Split Samples:

TOPSOIL STOCKPILE
LABORATORY REPORTS

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	OSP-2
Lab ID:	67191-01
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/4/97
Dilution Factor	10
% Solids	89.28

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	43	1	
Lead	49	0.51	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	OSP-3
Lab ID:	67191-02
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/4/97
Dilution Factor	10
% Solids	90.52

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	48	1.1	
Lead	43	0.53	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	OSP-4
Lab ID:	67191-03
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/4/97
Dilution Factor	10
% Solids	89.13

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	36	1	
Lead	72	0.52	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	OSP-5
Lab ID:	67191-04
Date Received:	9/4/97
Date Prepared:	9/4/97
Date Analyzed:	9/4/97
Dilution Factor	10
% Solids	88.29

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	87	1.1	
Lead	130	0.55	

Hydrometrics, Inc.

CHAIN OF CUSTODY RECORD

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

PROJ. NO.: 0700

PROJECT NAME: Marine View Drive Widening

SAMPLERS: (Signature)

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As	Total Pb	REMARKS
7190-1	9/3/97	1630		✓	MVD-01	1	X	X	D.L. < 0.5 µg/filter
2	"	"		✓	MVD-02	1	X	X	D.L. < 0.1 µg/"
3	"	"		✓	MVD-03	1	X	X	" " "
	9/3	1800	✓		DSP-2	1	✓	✓	Soil 3 day turn
	"	"	✓		DSP-3	1	✓	✓	
	"	"	✓		DSP-4	1	✓	✓	
	"	"	✓		DSP-5	1	✓	✓	

Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	9/4/97 1355				
Relinquished (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		Mary Custis	9/4/97 2:00	PO # 7020 T	

Split Samples:

1/1/4

TILL STOCKPILE LABORATORY REPORTS
(First Round)

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-100
Lab ID:	73209-01
Date Received:	6/3/98
Date Prepared:	6/5/98
Date Analyzed:	6/8/98
Dilution Factor	10
% Solids	96.62

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	4.5	0.96	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-101
Lab ID:	73209-03
Date Received:	6/3/98
Date Prepared:	6/5/98
Date Analyzed:	6/8/98
Dilution Factor	10
% Solids	96.18

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	4.4	0.92	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-102
Lab ID:	73209-04
Date Received:	6/3/98
Date Prepared:	6/5/98
Date Analyzed:	6/8/98
Dilution Factor	10
% Solids	89.7

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	12	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-103
Lab ID:	73209-05
Date Received:	6/3/98
Date Prepared:	6/5/98
Date Analyzed:	6/8/98
Dilution Factor	10
% Solids	85.51

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	19	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-104
Lab ID:	73209-06
Date Received:	6/3/98
Date Prepared:	6/5/98
Date Analyzed:	6/8/98
Dilution Factor	10
% Solids	89.64

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	10	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-105
Lab ID:	73209-07
Date Received:	6/3/98
Date Prepared:	6/5/98
Date Analyzed:	6/8/98
Dilution Factor	10
% Solids	87.75

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	66	1.1	

Hydrometrics, Inc.

090
0700

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
0700 Task 2	City of Everett (Stockpile)

SAMPLERS: *(Signature)* Tim Wilson

Steve Thompson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As	REMARKS
	6/2/98	1400	X		EVT-9806-100	1	X	ICPMS
		1405	X		EVT-9806-100A	1	X	
		1415	X		EVT-9806-101	1	X	
		1425	X		EVT-9806-102	1	X	
		1435	X		EVT-9806-103	1	X	
		1445	X		EVT-9806-104	1	X	
	↓	1455	X		EVT-9806-105	1	✓	

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Tim Wilson	6/3/98 1050				
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
	6/3/98 850	M Hodgman		P.O. # 7777-T	

Split Samples:
I) Accepted I) Declined

TILL STOCKPILE LABORATORY REPORTS
(Second Round)

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-106
Lab ID:	73565-01
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	88.97

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	12	2.2	
Lead	12	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-107
Lab ID:	73565-02
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	82.79

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	12	2.3	
Lead	15	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-108
Lab ID:	73565-03
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	82.87

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	16	2.1	
Lead	26	1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-109
Lab ID:	73565-04
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	87.76

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	12	2.1	
Lead	19	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-110
Lab ID:	73565-05
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	88.59

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	9.6	2.2	
Lead	15	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-111
Lab ID:	73565-06
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	86.1

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	12	2.2	
Lead	20	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-112
Lab ID:	73565-07
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	91.01

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	15	2	
Lead	24	1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-113
Lab ID:	73565-08
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	88.5

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	17	2.1	
Lead	20	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-114
Lab ID:	73565-09
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	89.57

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	17	1.9	
Lead	28	0.94	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-115
Lab ID:	73565-10
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	89.09

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	65	2.1	
Lead	120	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-117
Lab ID:	73565-12
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	88.57

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	13	2.2	
Lead	15	1.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Hydrometrics, Inc.
Client ID:	EVT-9806-118
Lab ID:	73565-13
Date Received:	6/17/98
Date Prepared:	6/18/98
Date Analyzed:	6/18/98
Dilution Factor	10
% Solids	86.56

Metals by ICP-MS - USEPA Method 6020

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	9.2	2.2	
Lead	13	1.1	

Hydrometrics, Inc.

950 Pacific Avenue • Suite 700 • Tacoma, WA 98402 • (253) 572-5481 • FAX (253) 572-5487

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
0700	City of Everett

SAMPLERS: *(Signature)* T. J. Thompson

Steve Thompson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total As + Pb	REMARKS
	6-17-98	0945	X		EVT-9806-106	1	X	RUSH
		0945	X		EVT-9806-107	1	X	
		0950	X		EVT-9806-108	1	X	ICPMS
		1020	X		EVT-9806-109	1	X	
		1025	X		EVT-9806-110	1	X	
		1030	X		EVT-9806-111	1	X	
		1100	X		EVT-9806-112	1	X	
		1105	X		EVT-9806-113	1	X	
		1110	X		EVT-9806-114	1	X	
		1130	X		EVT-9806-115	1	X	
		1135			EVT-9806-116	1	X	
		1140			EVT-9806-117	1	X	
		1145			EVT-9806-118	1	X	

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
T. J. Thompson	6/17/98 1145				
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	*Relinquished by: (Signature)*	Date/Time	Received by: *(Signature)*
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)* M. Horgan	Date/Time 6/17/98 1740	Remarks PO# 7800	

Split Samples:
☐ Accepted ☐ Declined

APPENDIX F
REGULATORY RECORDS/PERMITS

MITIGATED DETERMINATION OF NONSIGNIFICANCE
FOR
EAST MARINE VIEW DRIVE

MITIGATED DETERMINATION OF NON-SIGNIFICANCE
SEPA #73-95
East Marine View Drive Improvement

DESCRIPTION OF PROPOSAL: The proposed action is the issuance of Public Works permits to widen East Marine View Drive from a 2-lane section to a 4/5-lane section and construct curb, gutter, sidewalk, storm drainage and landscaping improvements.

FILE WO # 2632

PROPONENT: City of Everett Engineering/Public Works Department
3200 Cedar Street
Everett, WA 98201

PROPONENT'S REPRESENTATIVE: Ken Storseth
3200 Cedar Street
Everett, WA 98201

LOCATION: Section 8-TWP 29-R5 East Marine View Drive from Alverson Boulevard to Broadway

ZONING: M-2

GENERAL PLAN: 5.1B, Heavy Industrial/Urban Multi-use

Lead Agency: City of Everett Planning Department

Contact Person: Faheem Siddiq Phone: 259-8731

Mitigation Measures:

The environmental impacts of this proposal are documented in the Environmental Checklist and other information on file with the City. The listed requirements are placed in response to our review of this information:

AGENCIES WITH JURISDICTION

Department of Transportation

MITIGATION OF ADVERSE IMPACTS BY SEPA

1. Any grading/fill on this site shall be done so as to not impact the surrounding properties. (SEPA Earth, Land and Shoreline Use Policies.)

2. The Snohomish River Bicycle-Pedestrian Public Access Plan includes the section of Marine View Drive proposed for improvement by this project. The plan designates this portion of Marine View Drive as a bikeway (see attached map). The purpose of the bikeway is to provide a continuous bicycle path from the Everett waterfront to the neighborhoods on the east side of the city. The proposed improvement should include provision for bicycles as an important mode of transportation and also a recreational amenity. (SEPA Transportation/Circulation Policies)

3. This section (as shown on Project Site Plan dated October 12, 1995) of Marine View Drive functions as a gateway to the Everett Waterfront and Navy Base. Landscaping shall be provided where possible.

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An Environmental Impact Statement is not required under RCW 43.21C.030(2)(c). This determination assumes compliance with State law and City ordinances related to general environmental protection including but not limited to right-of-way improvement requirements, drainage, etc. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request. This Mitigated Determination of Non-Significance is specifically conditioned on compliance with the conditions attached hereto which are incorporated by reference as if fully set forth herein.

This MDNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 15 days from the date below. Comments must be submitted by December 23, 1995 or fifteen (15) days after the date shown on the notarized copy of the notice of posting, whichever date is later.

Responsible Official: Paul A. Roberts

Title: Planning and Community Development Director

Address: 2930 Wetmore Avenue, Suite 100, Everett, WA 98201

Date: December 8, 1995

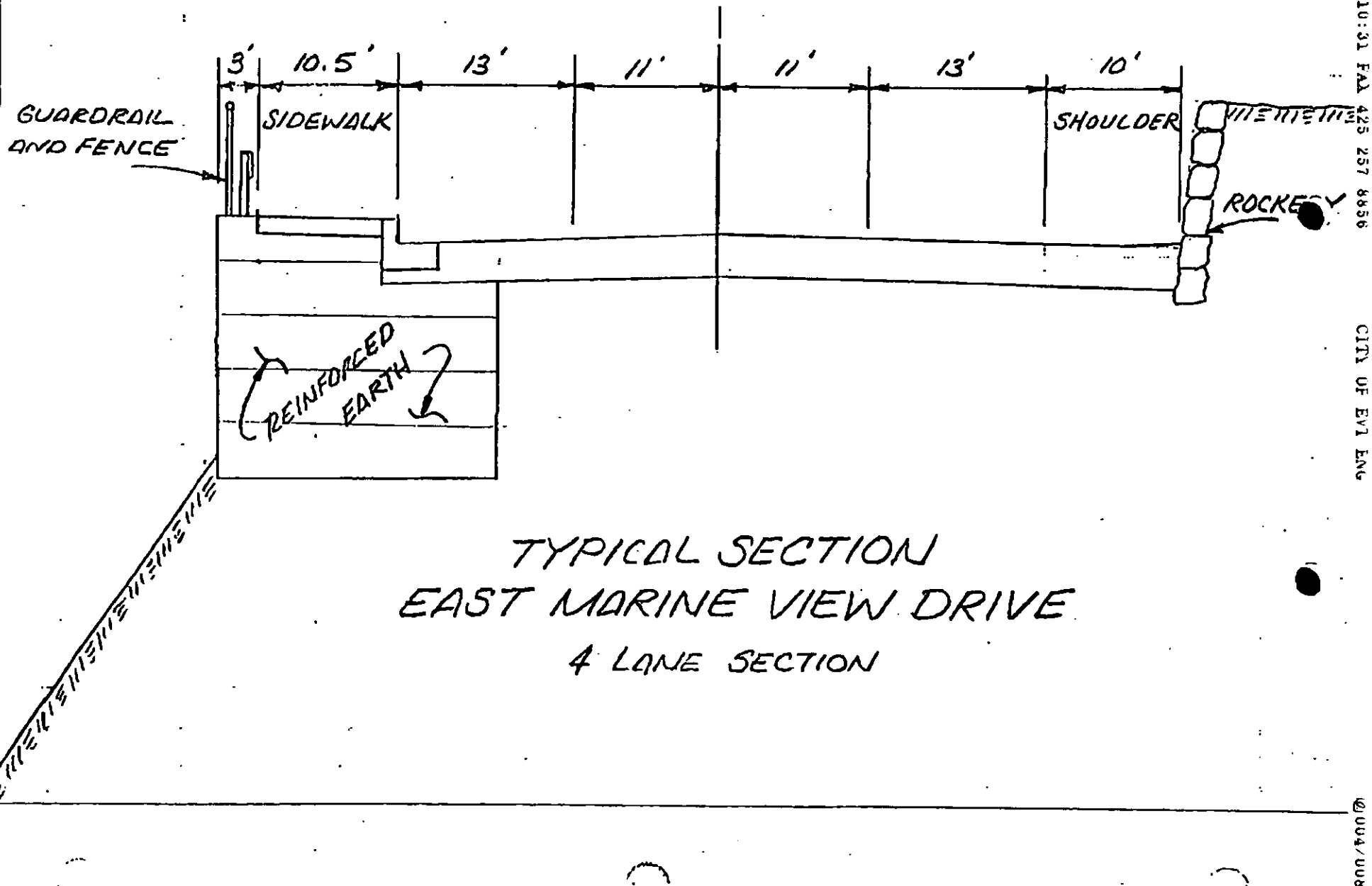
Signature: F. S. for Paul A. Roberts

You may appeal this determination to the City Clerk at City Hall, 3002 Wetmore Avenue no later than 10 working days from the date the MDNS becomes final (which is after the 15 day comment period) by submitting a written statement requesting an appeal which sets forth the name and address of the person aggrieved, an explanation of why the person is aggrieved, a clear and concise statement of the specific issues for the appeal on a form provided by the Planning Department, and a fee. You should be prepared to make specific factual objections. Appeal application packets are available from the Department of Planning/Community Development at 2930 Wetmore Avenue, Suite 100.

Contact Faheem Siddiq to read or ask about the procedures for SEPA appeals.

NOTE: A DNS may be withdrawn in the event of significant changes in the proposal, disclosure of new significant information, misrepresentation by the applicant, or failure to comply with the conditions upon which this Determination of Non-Significance is predicated.

scpa7395/faheem/jhl/jw



TYPICAL SECTION
EAST MARINE VIEW DRIVE
4 LANE SECTION

ADDENDUM TO
MITIGATED DETERMINATION OF NON-SIGNIFICANCE
SEPA #73-95 (East Marine View Drive Improvements)
January 16, 1997

DESCRIPTION OF ORIGINAL PROPOSAL: The proposed action is the issuance of Public Works permits to widen East Marine View Drive from a 2-lane section to a 4/5-lane section and construct curb, gutter, sidewalk, storm drainage and landscaping improvements.

ADDENDUM:

Introduction and Purpose of this Addendum. In 1995, the City of Everett (City) proposed transportation improvements to East Marine View Drive (SR 529), including widening the road from a 2-to-3 lane section to a 4-to-5 lane section and constructing associated curb, gutter, sidewalk, storm drainage and landscaping improvements (the Project).

The City has previously issued a mitigated DNS (#73-95) on 12/8/95, after public notice and opportunity to comment (the prior environmental documents on the Project are incorporated by reference) and has been processing permits for the Project and preparing for construction.

Since the MDNS, new information has been received which indicates that a portion of the construction area is within the Everett Smelter Site study area. As a result of the studies by the Washington State Department of Ecology (Ecology) and additional geotechnical studies by the City, an additional mitigation measure has been added to the Project that will provide for cleanup of any contaminated soils encountered during construction.

This addendum discusses the additional mitigation measure, which is technically called an independent cleanup (or independent remedial action) under the state Model Toxics Control Act (MTCA). The City will submit a public independent remedial action report to Ecology at the completion of the Project next fall, including the results of monitoring to confirm that the cleanup actions were properly performed.

The cleanup work will not disturb soils on any residential properties. It also will not foreclose cleanup options or define the cleanup standards for the area near the former smelter or on adjacent residential neighborhoods. Those decisions will be made by Ecology in its final cleanup action plan for the Smelter site, which is currently planned to be issued in the Fall of 1997.

Background on the Road Project and Schedule. The City's comprehensive plan adopted under the Growth Management Act (GMA) identifies the need to widen E. Marine View Drive to provide additional transportation capacity to the Everett waterfront and is a key component and the last transportation improvement for the U.S. Navy Homeport project at Everett. The Project was identified as a mitigation measure in the Homeport EIS and is being funded with state and federal (Dept. of Defense) funds. The improvements were expected to be substantially complete by January 1997 to coincide with the arrival of the carrier task force. It is not anticipated that the improvements will be completed in October 1997.

Environmental Conditions and Mitigation Measures. Because a portion of the E. Marine View Drive Improvements project area is within the Everett Smelter Site study area, additional sampling indicated that existing soils in the road right-of-way have levels of arsenic and lead which warrant cleanup under state cleanup laws.

The City, in conjunction with Hydrometrics, Inc. conducted site investigations and prepared an independent remedial action plan (which are incorporated herein by reference) to address the cleanup of contaminated soils during Project construction. These documents are available for review at the offices of the Planning and Community Development Department and Public Works Department at the addresses listed in this Addendum.

The cleanup work will be accomplished as part of the construction of the road project. As noted below, the contaminated soils will be isolated from the environment, and a small quantity with elevated arsenic levels (approximately 100 cubic yards) will be taken to a properly permitted facility for these materials (a lined landfill permitted under state/federal laws (WAC 173-351/RCRA Subtitle D)).

The cleanup mitigates both existing environmental conditions and environmental health impacts associated with construction of the road project. A summary of the cleanup plan and protective mitigation measures incorporated into the plan are as follows:

- Soils on the south side of the roadway will be excavated and used as fill for the north side of the road. The contractor will be required to control dust during construction by watering the site. Approximately 12,000 cubic yards of clean soil (lower than 20 ppm concentrations of arsenic based on sampling) will be removed from the Project area for subsequent reuse.
- The entire roadway will be capped with asphalt and a concrete sidewalk. This will provide an effective barrier to human contact and to infiltration of surfacewater. As an additional control measure, shallow groundwater interceptor drains will be installed on the upgradient side of the ROW to intercept groundwater and prevent its contact with soils under the new or existing pavement.
- Any brick or debris to be removed from the project site during construction will be disposed at a permitted facility. Sampling indicates that the material is not a state designated dangerous waste.
- Any trees, shrubs, and bushes that are removed from their current locations as a result of the work will be cleaned of clinging soils to the extent practical, chipped or composted and recycled for reuse. If reuse is not practicable, the vegetation will be tested for arsenic prior to proper disposal by the contractor at a permitted facility.
- Utility trenches will be backfilled with clean imported material in those areas that have arsenic concentrations above 20 ppm. This will allow further maintenance work on facilities without causing workers to come into contact with original soil.
- Those soils in the ROW that are currently covered with an impermeable barrier such as asphalt or concrete will not be disturbed. Soils on residential properties will also not be disturbed.

Built Environment. The independent cleanup addresses environmental health risks associated with existing contaminated soils and Project construction; enables implementation of a mitigation measure for land, use, transportation, and public services and utilities impacts of the Navy Homeport; and is consistent with the City's comprehensive plan (the City Council has placed a high priority on the project in the City's 6-year street plan, 1997 budget and capital facilities planning, especially in light of the needs of the current and growing population).

Natural Environment. As noted above, measures to prevent air and water borne emissions have been incorporated into the cleanup plans. The cleanup would provide long term protection of human health and the natural environment.

As indicated above, the analysis of the additional mitigation measure does not indicate or result in a significant adverse environmental impact; rather, performing the cleanup in conjunction with road construction would improve existing and future environmental conditions in the Project area. An Addendum to the existing

environmental checklist/DNS has therefore been prepared to inform the public of this additional mitigation measure and independent cleanup work.

PROPONENT: City of Everett Engineering/Public Works Department
Dave Davis
3200 Cedar Street
Everett, WA 98201

LOCATION: Section 8, TWP 29-R5, East Marine View Drive from Alverson Boulevard to Broadway

ZONING: M-2 **GENERAL PLAN:** 5.1B, Heavy Industrial/Urban Multi-Use

Lead Agency: City of Everett Planning Department

Contact Person: Faheem Siddiq Phone: 259-8731

The MDNS remains unchanged and in full force and effect, as augmented by the additional mitigation measure. If you have any questions, comments or need additional information, please contact **Faheem Siddiq** no later than **January 30, 1997**. There is no administrative appeal of the Addendum.

Responsible Official: Paul A. Roberts

Title: Planning and Community Development Director

Address: 2930 Wetmore Avenue, Suite 100, Everett, WA 98201-4044

Date: January 16, 1997

Signature: _____

addmdns/fas

MITIGATED DETERMINATION OF NONSIGNIFICANCE
FOR
LEGION MEMORIAL GOLF COURSE

PROPOSED MITIGATED
DETERMINATION OF NON-SIGNIFICANCE
SEPA #4-97
Legion Golf Course Renovation
February 24, 1997

DESCRIPTION OF PROPOSAL: The Parks Department proposes renovation of Legion Golf Course, including relocation of greens, landscaping, parking and drainage improvements *(including biofiltration and routing to the City's secondary treatment plant)*. *Approximately* 160,000 cubic yards of clean sand and top soil fill will be needed to construct the project. The proposed improvements would implement the Legion Golf Course Master Plan, approved in 1992, and the Parks and Recreation Comprehensive Plan, amended in 1996.

The City, in conjunction with Hydrometrics Inc., has prepared an independent Remedial Action Plan which addresses the issues relating to the cleanup and disposal of arsenic-contaminated soils within the project area. The plan is available for public review at the offices of the Planning and Community Development Department at the address listed below. The cleanup work will not disturb soils on any residential properties. It also will not foreclose cleanup options or define the cleanup standards for the area near the former smelter or on adjacent residential neighborhoods. Those decisions will be made by the Department of Ecology in its final cleanup action plan for the Smelter Site, which is currently planned to be issued in the fall of 1997.

PROPONENT:	City of Everett Parks and Recreation Department Forest Park, 802 Mukilteo Blvd. Everett, WA 98205
PROPONENT'S REPRESENTATIVE:	Daryl Bertholet/Jay McGill
LOCATION:	144 West Marine View Drive
ZONING:	Park Zone
GENERAL PLAN:	Parks/Open Space
Lead Agency:	City of Everett Planning Department
Contact Person:	David Tyler Phone: 257-8731

The environmental impacts of this proposal are documented in the Environmental Checklist and other information on file with the City. The listed requirements are placed in response to our review of this information:

2930 Wetmore, Suite 100, Everett, WA 98201 ☎ (206) 259-8731, Fax (206) 259-8742

MITIGATION OF ADVERSE IMPACTS UNDER CITY CODES, SEPA OR OTHER LAWS

(Note: Generally existing City codes or other laws provide the basis for requiring mitigation measures. If SEPA authority is needed in order to require additional mitigation measures, the City's SEPA policies that provide the basis for the mitigation measures are also noted in parentheses.)

1. Grading, erosion control, irrigation and drainage improvements will be performed to City of Everett standards and specifications under a City grading permit, including: (a) grading and fill will not adversely affect the surrounding properties; (b) if archeological resources are uncovered during construction, construction shall stop until the Planning Department is notified (Kris Ravetz, 257-8731), and an appropriate plan is implemented (SEPA Earth, Land and Shoreline Use Policies)

2. Cleanup of arsenic-contaminated soils will be performed as an independent cleanup under the Model Toxics Control Act (MTCA) in consultation with the Washington State Department of Ecology (Ecology), as outlined in the Independent Remedial Action Plan (Hydrometrics 1996), which is summarized and incorporated by reference into the environmental checklist. If any problem waste is removed from the site, any treatment or disposal in Snohomish county will follow applicable rules of the Snohomish Health District, as noted in the cleanup plan. Following completion of the project, a final independent cleanup report will be submitted to Ecology. (SEPA Earth, Environmental Health Policies)

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An Environmental Impact Statement is not required under RCW 43.21C.030(2)(c). This determination assumes compliance with State law and City ordinances related to general environmental protection including but not limited to right-of-way improvement requirements, drainage, etc. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request. This Mitigated Determination of Non-Significance is specifically conditioned on compliance with the conditions attached hereto which are incorporated by reference as if fully set forth herein.

The lead agency will not act on this proposal for 15 calendar days from the date below. Comments must be submitted by March 11, 1997 or fourteen (14) calendar days after the date shown on the notarized copy of the notice of posting, whichever date is later.

Responsible Official: Paul A. Roberts

Title: Planning and Community Development Director

Address: 2930 Wetmore Avenue, Suite 100, Everett, WA 98201

Date: February 24, 1997

Signature: _____

You may appeal this determination to the City Clerk at City Hall, 3002 Wetmore Avenue no later than 14 calendar days from the date the MDNS becomes final (which is after the 15 calendar day comment period) by submitting a written statement requesting an appeal which sets forth

the name and address of the person aggrieved, an explanation of why the person is aggrieved, a clear and concise statement of the specific issues for the appeal on a form provided by the Planning Department, and a fee. You should be prepared to make specific factual objections. Appeal application packets are available from the Department of Planning/Community Development at 2930 Wetmore Avenue, Suite 100.

Contact David Tyler to read or ask about the procedures for SEPA appeals.

NOTE: A DNS may be withdrawn in the event of significant changes in the proposal, disclosure of new significant information, misrepresentation by the applicant, or failure to comply with the conditions upon which this Determination of Non-Significance is predicated.

INFORMATION FOR DEVELOPER:

The following information is provided for the developer's benefit. These are not SEPA conditions. All requirements are preliminary in nature, and are based upon the preliminary site plan and the ordinances in effect at time of submittal for SEPA review. **The proposal must comply with all ordinances in effect at the time a complete building permit application is filed, including those not specifically set forth herein.** (Exception: For vesting under the Zoning Code, please refer to Section 44 of the Zoning Code). Contact the Planning Department for information regarding appeals processes for the requirements listed in this document.

1. A Public Works permit is required for this project. Detailed drawings in accordance with City Design and Construction Standards shall be submitted to the Public Works Department showing site parking layout, landscaping, utilities, storm drainage, temporary construction erosion control, and all required improvements in the public right-of-way. Public Works Department approval of these drawings is required prior to any permits being issued.

2. If greater than 10,000 square feet of paved surface will be created by this project, water quality enhancement of stormwater runoff from the paved areas must occur prior to discharge of the stormwater from the site or to a stream or wetland.

   Stormwater detention/retention, quality protection, and enhancement requirements for this project shall be those requirements in effect at the time of application for Public Works permits. Three options for stormwater quality enhancement are presented in the current city standards. The least preferred option is allowed only if the first two options are infeasible in the opinion of the Public Works Department. The options for stormwater quality enhancement are, in order of preference:

   1) An infiltration basin designed and constructed according to city standards.

   2) A wetpond designed and constructed to city standards.

   3) A baffle-type oil/water separator followed by a vegetated swale, both designed and constructed according to city standards.

3. On-site detention is required per city standards, OR, in lieu of providing on-site detention, if the downstream stormwater systems have the capacity to handle the additional runoff, payment to City Drainage Fund #340 is allowed.

4. The restrooms must be designed to be handicapped accessible in accordance with the state building code.

5. City streets and alleys are to kept clear of dirt and debris at all times during construction. Dust suppression and street cleaning are required as directed by the Public Works Inspector.

PUBLIC WORKS PERMIT
FOR
LEGION MEMORIAL GOLF COURSE

Application For

PUBLIC WORKS PERMIT

PUBLIC WORKS DEPARTMENT
3200 Cedar Street
Everett, WA 98201 259-8810

Date March 11/97

Public Works Permit # 97/130

Building Permit #

Public Works Fee $ 1116.50

TYPE OR PRINT ONLY

City of Everett | 802 Mukilteo Blvd | Everett | WA | 98203 | 257-8300
Owner | Mailing Address | City | Zip | Phone

Applicant | Mailing Address | City | Zip | Phone

Describe Proposed Work Legion Golf Course Renovation

PROJECT ADDRESS (if known) 144 West Marine View Dr.

Attach four (4) copies of plans for proposed work - Draw to scale and note the following if applicable:
*Property Lines *Outline and dimensions of all existing and proposed structures on the lot *Existing and proposed utilities
*Centerline of street *Indicate North *Show any proposed grading changes *Show measurements

DO NOT WRITE BELOW THIS LINE

PERMIT CONDITIONS:
1. All calls for inspection shall be made 24 hours in advance - phone 259-8810.
2. All work shall be performed in accordance with this permit and current City of Everett Design and Construction Standards and Specifications.
3. Call Location Underground Service 48 hrs. before you dig. **TOLL FREE NUMBER 1-800-424-5555.**

4. Civil work to be done per plans approved on 5-1-97

ISSUED
MAY 02 1997
CITY OF EVERETT
Building Division

Approved for Construction — Date 5/1/97

FINAL INSPECTION — Date 6/98
Approved as Constructed

ACKNOWLEDGEMENT OF CONDITIONS
The undersigned owner/applicant hereby agrees to hold and save h the City of Everett from any and all claims for damages, costs, expe causes of action that may arise because of installation and maintar the improvement or other right-of-way use hereto applied for and furthe to remove same upon notice from the City and to replace public damaged thereby.

Signature of Applicant — 08/11/

WORK MUST BE STARTED WITHIN 180 DAYS OF DATE PERMIT IS ISSUED AND THEREAFTER IS TO BE DILIGENTLY PURSU

CITY OF EVERETT
UTILITIES PERMIT

Date: 02/04/98 CKWO #: _____

Service Address: 144 W MARINE VIEW DR ___Change Request

Billing Name: CITY OF EVERETT PARKS
Billing Address: 802 W MUKILTEO BLVD
City, State, Zip: EVERETT WA 98201
Phone: 257-8300

Legal Description: Lot 0 Blk 0 Addn:
Frontage: No. of Units:

WATER SERVICE

S.O. No. 0 Application No. 0

Fixed: Deposit:
Svc. Size: Svc. Type: Water Permit Fee: $0.00

Setter Installation Date_____ By_____

Meter No._____ Size_____ Brand_____

Meter Installation Date_____ By_____

Water On___ Off___ Locked Out___ By_____
Remarks:

TSG_____

SEWER SERVICE

Permit No.: 31412

Permit Type: ALTERATION LID No.:

Sewer Permit Fee: $30.00

Systems Development Fees:
Water $0.00
Sewer $0.00 TOTAL: $0.00

Bond III Connection Charge:
Trunk $0.00
Lateral $0.00 TOTAL: $0.00

Remarks:

Inspected by No Inspection Date_____

Grand Total: $30.00

ISSUED
MAR 03 1998
CITY OF EVERETT
Public Works
Permit Services