

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial)	Enforcement Order
Action by:)	
)	No. DE 94TC-N258
The City of Everett)	
ATTN: Public Works Department)	
3200 Cedar Street)	
Everett, Washington 98201)	

To: The City of Everett
 ATTN: Public Works Department
 3200 Cedar Street
 Everett, Washington 98201

I.

Jurisdiction

This Order is issued pursuant to the authority of RCW 70.105D.050(1).

II.

Statement of Facts

1. The area in this matter is known as the Everett Landfill/Tire Fire Site (site). The site is located in Everett, Washington in Snohomish County. The site is situated adjacent to the Snohomish River and occupies approximately 70 acres in a predominantly commercial area. The triangular-shaped site is bounded on both the east and west by Burlington Northern Railroad tracks. It is bounded

5. There have been several previous environmental investigations at the site over the past 10 years. A summary of the previous investigations is described in paragraphs 6 through 10.

6. In 1985, Science Applications International Corporation (SAIC) conducted a preliminary problem assessment for the City of Everett. This consisted of a historical records search, limited surface water, soil, and tire fire ash sampling and analysis, and a preliminary site characterization and risk assessment. SAIC estimated there was approximately 200,000 yds³ of tire fire ash left on the surface of the landfill. In addition, the ash was classified as State Dangerous Waste because of aquatic toxicity.

7. In 1986, SAIC conducted a chemical fixation and stabilization study on the tire fire ash. The goal of the study was to evaluate the effectiveness and feasibility of immobilizing zinc contained in the tire fire ash by altering the pH of the ash using lime and other compounds. Results of the study indicate that pH adjustment of the ash effectively reduces the mobility of zinc contained in the ash.

8. In 1989, SAIC conducted an extended ash sampling program. The goals of this project were to further characterize the metals content in the ash, assess whether or not inorganic compound concentrations have changed since the fires occurred, characterize the size distribution of the ash, and determine the fraction of ash residue that could be

is still toxic to trout (classified as a State Dangerous Waste) and continues to be a potential threat to human health and the environment. Work conducted under the 1990 Order included a Feasibility Study for the site. This included cleanup alternatives for both the landfill and the tire fire ash.

11. The previous investigations have not completely characterized the site, especially information specific to the landfill. In addition, the City of Everett has recently proposed an ash treatment alternative that was not included in previous studies. Because of this, Ecology is issuing this Order to conduct a Supplemental RI/FS and interim actions. The Supplemental RI will include investigation of landfill gas and the existing landfill cover. The Supplemental FS will evaluate the City's proposed ash treatment alternative. The interim actions will include installation of a leachate collection system along the entire eastern border of the landfill.

III.

Ecology Determinations

1. The City of Everett (Everett) is an "owner or operator" as defined at RCW 70.105D.020(6) of a "facility" as defined in RCW 70.105D.020(3). Everett is also a "generator," as described in RCW 70.105D.040(1)(c), of a hazardous waste which was disposed of, or has otherwise come

IV.

- Work to be Performed

1. Based on the foregoing Facts and Determinations, it is hereby ordered that Everett take the following remedial actions and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein.

2. Based on results of investigations to date, Ecology has determined that interim actions are appropriate and warranted at the site. Everett shall perform interim actions according to the interim actions scope of work attached to this Order as Exhibit B. Exhibit B is incorporated by this reference and is an integral and enforceable part of this Order. The interim actions scope of work describes the necessary actions which are intended to adequately address the threat or potential threat posed by the release or threatened release of hazardous substances at the site. Everett shall submit draft and final interim action work plans to Ecology for review and approval.

3. Everett shall conduct interim actions pursuant to the final interim actions work plan approved by Ecology. Any interim actions chosen for the site will be subject to public notice. It is not anticipated that an interim action will constitute a substantial majority of the final cleanup action likely to be selected.

Following the approval of the final interim actions work

submitted in letter form to the Ecology site manager by the 10th of each month. Everett shall submit monthly progress reports until the completion of all tasks required by this Order.

5. Everett shall complete a supplemental RI/FS pursuant to the final work plan approved by Ecology. Such investigations may reveal that additional interim remedial action is needed at the site. Any interim actions chosen for the site will be subject to public notice. It is not anticipated that any interim actions will constitute a substantial majority of the final cleanup action likely to be selected.

6. Everett will use the information obtained in the supplemental RI/FS to revise the existing feasibility study, completed by Everett in September 1993. Specifically, this information will be used to supplement the remedial alternatives that include capping or containment of hazardous materials (tire fire ash and landfill refuse). Any elements of the original remedial alternatives that are impacted by the information obtained under this order shall be described and discussed in sufficient detail in the supplemental RI/FS report.

Everett shall submit to Ecology draft and final interim actions and supplemental remedial investigation reports. Ecology will provide written comments to Everett regarding the draft reports. Everett will incorporate Ecology's

to human health.

9. The performance schedule for the required remedial actions is included with the scopes of work that are attached to this Order as Exhibit D. Exhibit D is incorporated by this reference and is an integral and enforceable part of this Order. Ecology's failure to perform any obligation under this Order within the time specified in the schedule shall not excuse Everett from performing any of its obligations under this Order.

V.

Terms and Conditions of Order

1. Definitions Unless otherwise specified, the definitions set forth in Ch. 70.105D RCW and Ch. 173-340 WAC shall control the meanings of the terms used in this Order.

2. Public Notice RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing such public notice and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which indicate to Ecology that the Order is inadequate or improper in any respect.

3. Remedial Action Costs. Everett shall pay to Ecology costs incurred by Ecology pursuant to this Order. These costs shall include work performed by Ecology or its contractors for investigations, remedial actions, and Order

pursuant to the terms and conditions of this Order, shall be directed through the project coordinator(s). Should Ecology or Everett change project coordinator(s), written notification shall be provided to Ecology or Everett at least ten (10) calendar days prior to the change.

5. Performance. All work performed pursuant to this Order shall be under the direction and supervision, as necessary, of a professional engineer or hydrogeologist, or similar expert, with appropriate training, experience and expertise in hazardous waste site investigation and cleanup. Everett shall notify Ecology as to the identity of such engineer(s) or hydrogeologist(s), and of any contractors and subcontractors to be used in carrying out the terms of this Order, in advance of their involvement at the site. Everett shall provide a copy of this Order to all agents, contractors and subcontractors retained to perform work required by this Order and shall ensure that all work undertaken by such agents, contractors and subcontractors will be in compliance with this Order.

Except when necessary to abate an emergency situation, Everett shall not perform any remedial actions at the site outside that required by this Order unless Ecology concurs, in writing, with such additional remedial actions.

WAC 173-340-400(7)(b)(i) requires that "construction" performed on the site must be under the supervision of a professional engineer registered in Washington.

quality analysis conducted under this Order shall be performed by a lab that is accredited by Ecology to perform such work unless Everett is granted a waiver from Ecology's Waste Management Programs Assistant Director.

Everett shall provide to Ecology the laboratory deliverables listed in Exhibit E. Exhibit E is incorporated by this reference and is an integral and enforceable part of this Order.

8. Public Participation Ecology shall prepare and/or update a public participation plan for the site. A public participation plan for the site is attached to this Order as Exhibit F and incorporated as part of this Order. The purpose of the public participation plan is to promote effective and meaningful public participation regarding this site through the coordinated efforts of Ecology, Everett, and the public. Ecology and Everett are both responsible for the public participation plan at the site. The attached plan delineates respective roles and responsibilities. In the event of disagreement over implementation of the public participation plan, Ecology retains the final decision-making and approval authority per WAC 173-340-600(8)(g).

9. Retention of Records Everett shall preserve in a readily retrievable fashion, during the pendency of this Order and for ten (10) years from the date of completion of the work performed pursuant to this Order, all records, reports, documents, and underlying data in its possession

substances from the site.

In the event Ecology determines that conditions at the site are creating or have the potential to create a danger to the health or welfare of the people on the site or in the surrounding area or to the environment, Ecology may Order Everett to stop further implementation of this Order for such period of time as needed to abate the danger.

12. Transference of Property No voluntary or involuntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the site shall be consummated by Everett without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to transfer of any legal or equitable interest Everett may have in the site or any portions thereof, Everett shall serve a copy of this Order upon any prospective purchaser, lessee, transferee, assignee, or other successor in such interest. At least thirty (30) days prior to finalization of any transfer, Everett shall notify Ecology of the contemplated transfer.

13. Compliance With Other Applicable Laws All actions carried out by Everett pursuant to this Order shall be done in accordance with all applicable federal, state, and local requirements.

14. Revisions to the Scope of Work and Schedule.

unavoidable casualty.

However, neither increased costs of performance of the terms of this Order, nor changed economic circumstances, nor unavailability of qualified personnel to perform work required by the terms of this Order shall be considered good cause for granting a revision. Any disagreement regarding requested changes shall be resolved by following the dispute resolution process.

VI.

Satisfaction of this Order

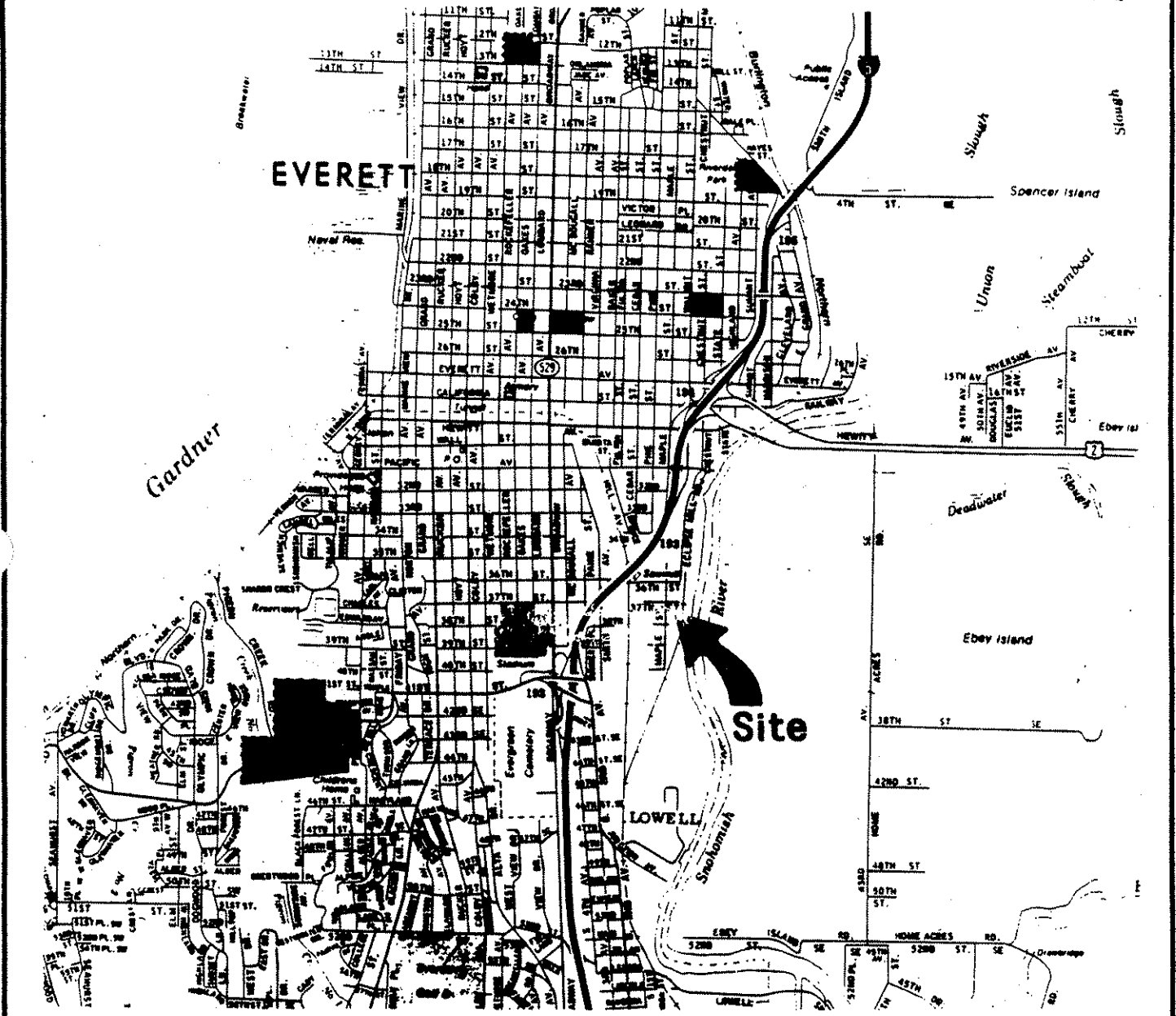
The provisions of this Order shall be deemed satisfied upon Everett's receipt of written notification from Ecology that Everett has completed the remedial activity required by this Order, as amended by any modifications, and that all other provisions of this Order have been complied with.

VII.

Enforcement

1. Pursuant to RCW 70.105D.050, this Order may be enforced as follows:
 - A. The Attorney General may bring an action to enforce this Order in a state or federal court.
 - B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the site.

EXHIBIT A



Scale in Miles

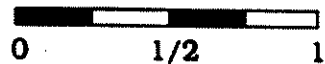
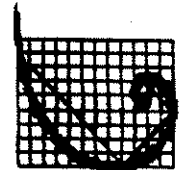
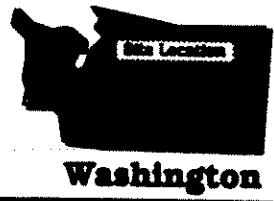


FIGURE 1-1
Site Vicinity Map
 Everett Landfill
 Everett, Washington



ERM

substantially reduce an uncontrolled release of hazardous substances (leachate) to the environment (Snohomish River). The interim actions are intended to contain and treat contaminated surface and ground water. The actions described below are intended to minimize or eliminate the on-going threat to the environment posed by this landfill leachate.

Interim Action Tasks

Six separate tasks are described below. These include a review of previous information relevant to the proposed interim actions, a site investigation, an interim actions workplan and report, monthly progress reports, installation of the leachate collection system and surface water controls, and an interim actions summary report.

Task 1 Review of Previous Studies

General on-site mapping of surface water drainage patterns has been conducted in previous studies. In addition, some site characterization has occurred on the Simpson Site, also owned by the City of Everett. The Simpson Site is located southeast of the landfill and is also a potential source of contamination. The two sites are separated by three sets of Burlington Northern Railroad (BNR) tracks. Surface water presently flows onto the site and mixes with landfill leachate prior to discharging into the Snohomish River. Some of this water flows through the Simpson Site. Limited water quality data, collected in previous investigations, indicate the surface water flowing onto the site likely does not require remediation. If so, this "clean" surface water must be diverted away from the leachate collection system. A potential alternative is to divert this water into existing wetlands in the northern portion of the Simpson Site. This would require installation of a culvert under the BNR tracks. Everett shall insure that any diversion of surface water, or alteration of the existing wetlands, does not have any detrimental effect on the wetlands.

A review of previous investigations relevant to the proposed interim actions will be conducted. The purpose of this review is to evaluate the existing data and determine the potential impacts of the proposed interim actions. This review should focus on the following issues:

1. Characterization of all affected surface water drainages on both the landfill and Simpson sites, along with any adjacent areas that influence surface water. Characterization of surface water on the Simpson site will be limited to the drainages that are directly impacted by the diversion of surface water (ie. Bigelow Creek and the wetlands in the northern portion of the site). Source areas, drainage patterns, and discharge locations

The workplan will include an interim actions report prepared pursuant to 173-340-430 WAC. It will be completed prior to conducting any interim actions and shall be of scope and detail commensurate with the work performed. The workplan and interim actions report will include the following:

1. Description of current site conditions and a brief summary of all available data related to the interim actions;
2. List and description of proposed interim actions and how they will meet the requirements of WAC 173-340-430(1) and (2);
3. Description of alternative interim actions considered and an explanation why the proposed interim actions were selected;
4. A temporary waste storage, transfer, and disposal plan; and
5. Applicable design and construction requirements in WAC 173-340-400. There are two interim actions that are proposed. The following is a brief description of the work to be performed.

Surface Water Management

Surface and storm water occurs in areas on the site where it mixes with contaminated water (landfill leachate) prior to discharging into the Snohomish River through an outflow pipeline. The proposed leachate collection system (described below) is intended to intercept the landfill leachate at the eastern edge of the landfill before it can reach the Snohomish River. Surface water management is necessary to divert relatively clean surface and storm water away from the leachate collection system. Therefore, only landfill leachate will be collected, transported, and treated at the Everett wastewater treatment plant.

Everett will design and install surface water controls on the site. This may involve diversion of surface and storm water into nearby wetlands. All surface water control measures implemented at the site will comply with federal, and local applicable, relevant, and appropriate requirements.

Leachate Collection System

The 70-acre landfill was built on top of wetland and flood plain deposits along the west side of the Snohomish River. The landfill contains no engineered liner or leachate collection or control system. Available data indicates that leachate seeps out the side of the landfill, into a surface drainage, and discharges into the Snohomish River. The landfill refuse,

Draft and final copies of the report will be prepared. Everett will provide three copies of the draft report for Ecology's review. Ecology will provide comments regarding the draft report to Everett. The draft report will be revised to incorporate Ecology's comments. Three copies of the final report will be provided to Ecology.

Schedule

The schedule for the interim action tasks is included in Exhibit D.

existing landfill surface cover has not been adequately characterized and the potential risk from exposure to landfill gas has not been evaluated. The supplemental RI (described below) is intended to fill these information gaps.

The RI/FS report submitted in September 1993, contained a Feasibility Study (FS) that evaluated cleanup alternatives for the tire fire ash and landfill. Since that report was submitted, Everett has proposed an ash-treatment technology that was not included in the final RI/FS report. Everett requested that Ecology consider the new alternative that includes mixing the tire fire ash with lime and biosolids prior to capping.

Everett proposes that the biosolids and lime mixture will reduce the mobility of the zinc and PAHs in the tire fire ash. This treatment could potentially create a temporary beneficial use for waste lime and municipal biosolids.

Ecology has agreed to evaluate the new alternative. However, Ecology cannot select this alternative until the feasibility of the alternative is evaluated and the public has had an opportunity to comment on Ecology's decision. The supplemental FS is intended to evaluate this alternative. This evaluation will be consistent with, and meet the requirements of, WAC 173-340-350 and WAC 173-340-360.

Following completion of the tasks required by this scope of work, Ecology will prepare a Draft Cleanup Action Plan (DCAP) that will propose specific cleanup actions at the site. The DCAP will be made available for public review and comment before Ecology selects the final cleanup action. The final cleanup action chosen for the site will address all potential risks to human health and the environment. These will include any risks associated with the tire fire ash and the landfill.

Task 1 Supplemental RI/FS Work Plan

A supplemental RI/FS work plan will be prepared according to the requirements of the Model Toxics Control Act (MTCA). The work plan will describe the methods and procedures used to conduct the supplemental RI/FS tasks. The work plan will include a description of the landfill cover and gas investigation in addition to the supplemental risk assessment and feasibility study. The work plan will also include a Sampling and Analysis Plan (SAP), a Health and Safety Plan (HSP), and a Quality Assurance Project Plan (QAPP). The plans will meet the requirements of WAC 173-340-350 for RI/FS investigations. The health and safety plan shall include specific provisions in order to insure public safety.

Everett will submit three copies of the work plan to Ecology for review. Ecology will then provide comments regarding the draft work plan to Everett. Everett will incorporate Ecology's comments into a final work plan. Three copies of the final work plan will then be submitted to Ecology. Elements of the work plan are

in the RI/FS report completed by Everett in September 1993.

The investigation will include detailed mapping of surface water drainage on the site. Any springs, seeps, catch basins, storm drains or other relevant surface water features will be shown on the map. In addition, all surface structures and objects will be characterized. All existing potential sources of contamination on the surface shall be identified.

The study will include a site investigation, soil borings, and field mapping. All field notes, soil boring logs, and maps will be included in the supplemental RI/FS report prepared under Task 6. Everett will propose sample locations in the work plan prepared under Task 1.

Task 3C Landfill Gas Investigation

The overall objective of the landfill gas investigation is to provide adequate information for the assessment of risks associated with landfill gas on the site. In addition, information is needed regarding gas generation rates. This information is required in order to adequately design an appropriate final cover for the site. It will also influence potential future uses of the site.

The primary focus of the landfill gas investigation is to determine if hazardous chemicals are entering the ambient air from buried waste, to determine the concentrations of chemical constituents that may be identified, and to evaluate the potential risks associated with these concentrations. Completion of a soil vapor survey in conjunction with ambient air monitoring will allow the comparison of volatile compounds that may be detected in the soil with those that may be identified in the atmosphere. Comparison of these relative concentrations will provide the means to evaluate the relative contributions of on-site sources versus off-site sources.

This investigation will make use, to extent possible, of previously obtained information from previous investigations. This includes any relevant data collected by the Snohomish Health District and any available historic information regarding nature of fill material.

Following review of available information, sampling locations will be proposed in the work plan prepared under Task 1. Historic information indicates several distinct fill areas within the landfill. These areas were filled at different times and contain a variety of materials. The number of sample locations shall be sufficient to allow adequate characterization of each distinct fill area.

All soil vapor sampling will be conducted, to the maximum extent possible, to coincide with optimum weather conditions. Optimum weather conditions include dry conditions with little or no wind.

Fixed gases will be analyzed using ASTM Method D-1946. Aliquots for this analysis will be taken from the SUMMA canister. Detection limits for the various gases are described in the ASTM method.

Hydrogen sulfide and other sulfide compounds will be analyzed using either an impinges method (ASTM D-2385) or CARB Method 16. Detection limits for both methods are approximately 200 parts per billion. An equipment blank will be collected and analyzed using the method specified for this analysis.

EPA Method TO-5 or CARB-430 will be used to analyze for formaldehyde and other aldehydes. This method has detection limits of approximately 500 parts per million.

Task 4 Supplemental Risk Assessment

A Supplemental Risk Assessment (RA) will be prepared as part of the RI to fulfill the requirements of the MTCA. The RA will identify and evaluate the risks that the site presents to human health and the environment. This RA is limited to the contaminants detected in the Supplemental RI/FS. Human health risks will be computed using the MTCA equations in WAC 173-340-720 through WAC 173-340-750. The human health risk assessment must meet all the requirements of WAC 173-340-708. In addition, the risks associated with the proposed application of biosolids to the landfill and tire fire ash will also be included.

Environmental risks will be evaluated using current MTCA requirements. Subtasks include:

1. Identification of potential chemicals of concern;
2. Exposure and toxicity assessments;
3. Potential receptors;
4. Potential effects on sensitive environments, species, and wetlands;
5. Risk characterization for current and potential land use; and
6. Comparison of risk results to MTCA standards.

Task 5 Supplemental Feasibility Study

Everett has recently proposed treating the tire fire ash with lime and biosolids prior to capping the ash on site. This alternative was not included in the latest draft of the RI/FS report (September 1993). Everett has not completed a Feasibility Study (FS) on the alternative and the public has not had an opportunity to comment on Everett's proposal. This task is required to fulfill the requirements of the MTCA. Following the completion of this task, Ecology will propose a cleanup alternative for the tire fire ash. The public will have an opportunity to review and comment on Everett's

Minimum Functional Standards for Solid Waste Handling (Chapter 173-304 WAC). This regulation sets minimum performance standards for proper handling of solid waste materials.

Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 WAC), Rules and Regulations Governing the Regulation and Licensing of Well Contractors and Operators (Chapter 173-162 WAC), and the Water Well Construction Act (1971) (Chapter 18.104 RCW). These laws and regulations establish the minimum requirements for the construction of wells, and the licensing and regulation requirements of well contractors and operators.

National Oil and Hazardous Substance Pollution Contingency Plan [40 CFR 300.420(c)(ii)(1982)]. This plan (commonly called the NCP) establishes the procedures for responding to releases of toxic or hazardous substances.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (1980) and the Superfund Amendments and Reauthorization Act (SARA) (1986). These acts establish the procedure for investigating and remediating hazardous waste sites under federal lead.

Health and Safety (29 CAR 1901.120). These are federal requirements for health and safety training for workers at hazardous waste sites.

Federal Water Pollution Control Act of 1972 (Clean Water Act). This act establishes water quality requirements for discharges.

Water Quality Act of 1987, Section 308. This act sets water quality criteria for pollutants.

Safe Drinking Water Act of 1974. This act sets maximum contaminant levels (MCLs) for drinking water supplies.

Shoreline Management Act of 1971. Remedial actions conducted on this site must be consistent with the Shoreline Management Act and conducted in accordance with Everett's Master Shoreline Program.

Water Pollution Control Act (Chapter 90.48 RCW). Under this act, Ecology is given the authority to issue permits for discharge to the waters of the state, under either the NPDES or State Waste Discharge program, as appropriate.

Water Resources Act of 1971 (Chapter 90.54 RCW). The purpose of this chapter is to set forth fundamentals of water resource policy for the state to ensure that waters of the state are protected and fully utilized for the greatest benefit to the people of the state of Washington.

EXHIBIT D

The schedule for the Interim Action tasks (Exhibit B) is listed in the following table. Each item is listed along with the scheduled completion date. The duration of each task is shown in parenthesis.

<u>Interim Action</u>	<u>Completion Date</u>
1. Enforcement Order is signed	6/13/94
2. Public Comment Period (1 Month)	7/14/94
3. Ecology makes final revisions to Scope of Work (2 weeks)	7/28/94
4. Task 1, Review of Previous Studies (1.5 Months)	9/01/94
5. Task 2, Site Inspection (1 Month)	10/01/94
6. Task 3, Everett drafts Workplan and Report (1 Month)	11/01/94
7. Ecology reviews Draft Workplan and Report (1 Month)	12/01/94
8. Everett prepares Final Workplan and Report (2 Weeks)	12/15/94
9. Task 5, Everett conducts Interim Actions (4 Months)	4/15/95
10. Task 6, Everett drafts Summary Report (1 Month)	5/15/95
11. Ecology reviews Summary Report (1 Month)	6/15/95
12. Everett prepares final Summary Report (2 Weeks)	7/01/95

The schedule for the Supplemental RI/FS tasks (Exhibit C) is listed in the following table. Each item is listed along with the scheduled completion date. The duration of each task is shown in parenthesis.

<u>Supplemental RI/FS Action</u>	<u>Completion Date</u>
1. Enforcement Order is signed	6/13/94
2. Public Comment Period (1 Month)	7/14/94
3. Ecology finalizes Supplemental RI/FS Scope of Work (2 Weeks)	7/28/94
4. Task 1, Everett drafts Supplemental RI/FS workplan (1.5 Months)	9/01/94
5. Ecology reviews Supplemental RI/FS workplan (1 Month)	10/01/94
6. Everett finalizes Supplemental RI/FS workplan (2 Weeks)	10/15/94
7. Supplemental RI/FS Tasks 2 - 4 are conducted by Everett (3.5 Months)	2/01/95
8. Task 5, Everett prepares draft Supplemental RI/FS report (1 Month)	3/01/95
9. Ecology reviews draft Supplemental RI/FS report (1 Month)	4/01/95
10. Everett prepares final Supplemental RI/FS report (1 Month)	5/01/95
11. Public Comment Period (1 Month)	6/01/95

Note: 1.5 months has been allowed for Item 4 in both schedules listed above. This reflects the time required for the City of Everett to hire contractors to conduct the remedial action tasks. Everett is required to advertise for one month prior to hiring a consultant. In addition, time is allowed for the City Council to approve the appropriation of funds to conduct the remedial action tasks.

TABLE 7. (Continued)

Additional Deliverables for Volatile or Semivolatile Organic Compound Analyses^a

- Tentatively identified compounds (if requested) and methods of quantification, along with the three library spectra that best match the spectra of the compound of interest (see Appendix B, Figure B-1 for an example of a library spectrum).
- Reconstructed ion chromatograms for gas chromatography/mass spectrometry (GC/MS) analyses for each sample.
- Mass spectra of detected compounds for each sample.
- Internal standard area summary to show whether internal standard areas were stable.
- Gel permeation chromatography (GPC) chromatograms (for analyses of semivolatile compounds, if performed), recovery assessments, and replicate sample summaries. Laboratories should report all surrogate spike recovery data for each sample, and a statement of the range of recoveries should be included in reports using these data.

Additional Deliverables for Pesticide and PCB Analyses^a

- Gas chromatography/electron capture detection (GC/ECD) chromatograms for quantification column and confirmation columns for each sample and for all standards analyzed.
- GPC chromatograms (if GPC was performed).
- An evaluation summary for 4,4'-DDT/endrin breakdown.
- A pesticide standard evaluation to summarize retention time shifts of internal standards or surrogate spike compounds.

^a Many of the terms in this table are discussed more completely in Appendix B.