



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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August 5, 1997

Ms. Marla Parsel
Acting Public Works Director
Kittitas County - Department of Public Works
205 West Fifth Avenue, Room 108
Ellensburg, Washington 98926

Dear Ms. Parsel:

RE: Amendment to Agreed Order No. DE 94TC-C4222 to Include the Interim Action of Contaminated Soils Removal for the Protection of Groundwater

This letter constitutes an amendment to Agreed Order No. DE 94TC-C4222 (Agreed Order) issued pursuant to the authority of Revised Code of Washington (RCW) 70.105D.050(1). This amendment to the Agreed Order includes the work necessary to remove contaminated soils that are the continuing source of groundwater contamination at the Ellensburg Municipal Airport (Bowers Field). All other sections not specifically mentioned in this amendment continue to apply.

Section IV, Work to be Performed, shall be amended to incorporate the following subsections:

Section 4.5 Kittitas County will perform the interim cleanup actions set forth and described in the attached Interim Action Work Plan. The Interim Action Work Plan is attached to the Order as Exhibit D. The interim action will consist of contaminated soil removal for the purpose of protecting groundwater. This interim action is supported by information gathered for the Remedial Investigation/Feasibility Study (RI/FS) required by Section 4.1. The results of the interim action shall be combined with information previously collected and the RI/FS shall be completed according to Section 4.1.

4.6 Within 30 days of the effective date of this amendment, Kittitas County shall initiate the implementation of the Interim Action Work Plan. The final Remedial Investigation report shall be completed within two (2) years after the effective date of this amendment. Kittitas County shall submit the RI/FS report to Ecology for review and approval on or before this completion date. This amendment supersedes the schedule for the RI/FS described in Section 4.1 of the Agreed Order.



Ms. Marla Parsel
Amendment to Agreed Order No. DE 94TC-C4222
August 5, 1997
Page 2

Section 5.4 The project coordinator for Kittitas County shall be changed to:

Ms. Marla Parsel
Interim Kittitas County Public Works Director/Airport Manager
205 West Fifth Avenue, Room 108
Ellensburg, WA 98926

Effective Date of this Amendment to Order No. DE 94TC-C4222: _____

SEP 11 1997

Kittitas County
County Commission
205 West Fifth Avenue
Ellensburg, Washington 98926

By Mary Seebert
Chair of the Board

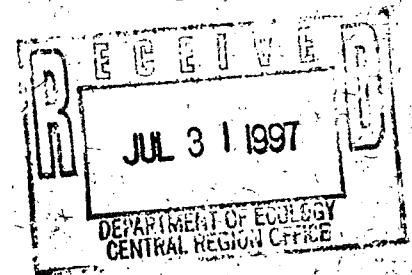
Attested by Clerk of the Board

By Don Kjosvik

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

By Donald W. Abbott
Donald W. Abbott

Acting Section Manager
Toxics Cleanup Program

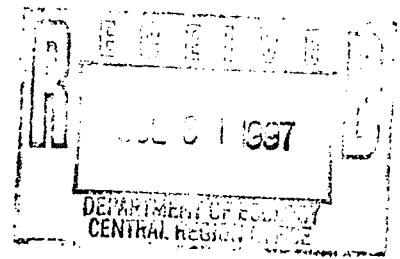


**Interim Action Work Plan
Midstate Aviation Site
Bowers Field
Ellensburg, Washington**

July 29, 1997

**For
Kittitas County
Department of Public Works**

July 29, 1997



Consulting Engineers
and Geoscientists
Offices in Washington,
Oregon, and Alaska

Kittitas County Department of Public Works
205 West 5th, Room 108
Ellensburg, Washington 98926

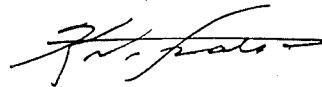
Attention: Marla Parsel

We are pleased to submit three copies of our "Interim Action Work Plan" for the Midstate Aviation Site located at Bowers Field in Ellensburg, Washington. We will provide you a conceptual project schedule and a cost estimate for the interim action in a separate letter.

We appreciate the opportunity to work with you on this project. Please call if you have questions or require more information.

Yours very truly,

GeoEngineers, Inc.



Kurt R. Fraese
Associate

DAC:KRF:vvl

Document ID: P:\4867002.WP

cc: ✓ Mark Peterschmidt
Washington State Department of Ecology

File No. 4867-002-85-1150

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EXECUTIVE SUMMARY

This interim action work plan describes the activities that will be completed for remediation of pesticide-contaminated soil and ground water in the vicinity of former pesticide mixing and wash rack facilities (referred to herein as the site) related to crop dusting operations at Bowers Field, Ellensburg, Washington. This work plan is intended to be incorporated by amendment into Section 4, "Work to be Performed" of Washington State Department of Ecology (Ecology) Agreed Order No. DE 94TC-C4222. The interim action will be conducted in accordance with the Model Toxics Control Act (MTCA).

Dinoseb, has been selected as the pesticide indicator compound at the site. It is expected that cleanup using dinoseb as an indicator compound will result in successful remediation of other pesticide compounds including Aldrin, BHCs, DDT and dieldrin, detected at lower concentrations than dinoseb at the site. The goal of the interim action is to (1) achieve site conditions that are protective of human health and the environment and (2) obtain a no further action (NFA) determination from Ecology for the site.

Dinoseb concentrations ranging from <0.20 milligrams per kilogram (mg/kg) to 17 mg/kg were detected in site soil samples obtained from test pits completed by Envirogen Inc. (Envirogen) during their August 1996 site characterization. Additionally, ground water samples obtained from four monitoring wells (MW-1 through MW-4) at the site were tested and found to exceed cleanup criteria for dinoseb.

The dinoseb MTCA Method B soil cleanup level selected for this interim action is 1.6 mg/kg. It is expected that removal of dinoseb-contaminated soil from the site will result in a reduction in dinoseb and other pesticide concentrations in ground water at the site.

The interim action will consist of remedial excavation and off-site disposal of contaminated soil at Rabanco's Roosevelt Regional Landfill in Klickitat County. The remedial excavation will extend to the shallow water table approximately 4 to 7 feet beneath the site surface. Cobbles will be separated from the excavated soil using a screen and reused as backfill on site. It is estimated that approximately 2,000 cubic yards (2,600 tons) of pesticide-contaminated soil will require off-site disposal.

Discrete soil samples will be obtained from the base of the remedial excavation at grid locations separated by 20 feet (one sample per 400 square feet). Discrete soil samples also will be obtained at approximately 20 foot intervals (lateral) from the excavation walls at depths of approximately 0.5 and 2.5 feet beneath the site surface and just above the water table. The soil samples will be submitted for chemical analysis of dinoseb using EPA Method 8270. Additionally, selected soil samples will be submitted for chemical analysis of Aldrin, BHCs, DDT and dieldrin using EPA Method 8080/8081.

Monitoring wells will be constructed to evaluate ground water quality after the remedial excavation is completed. Two existing monitoring wells (MW-2 and MW-3), expected to be removed during remedial excavation, will be replaced. Additionally, two new ground water monitoring wells will be constructed immediately downgradient of the remedial excavation. The site's existing upgradient well (MW-4) and a crossgradient well (MW-1) will be maintained.

The results of the remedial action and subsequent ground water monitoring will be documented in written summary reports submitted to Kittitas County and Ecology.

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Appendix A - Ecology Letter "Interim Action at Midstate Aviation Cleanup Site"
dated June 5, 1997

Appendix B - Envirogen "Soil Sampling Results" report dated October 25, 1996

Appendix C - Quality Assurance/Quality Control Plan

**INTERIM ACTION WORK PLAN
MIDSTATE AVIATION SITE
BOWERS FIELD, ELLENSBURG, WASHINGTON
FOR
KITITAS COUNTY**

1.0 INTRODUCTION

1.1 GENERAL

This interim action work plan describes the activities that will be completed for remediation of pesticide-contaminated soil and ground water in the vicinity of a former crop dusting facility operated by Midstate Aviation at Bowers Field, Ellensburg, Washington. The site is located in the southeast quarter of the southwest quarter of Section 24, Township 18 North, Range 18 East. A vicinity map is presented as Figure 1. A site plan is presented as Figure 2.

1.2 PURPOSE

The purpose of the interim action is to remove pesticide-contaminated soil located in the vicinity of former pesticide mixing, loading and airplane cleaning facilities related to crop dusting activities. The interim action will be conducted in accordance with MTCA. The goal of the remedial action will be to (1) achieve site conditions that are protective of human health and the environment, and (2) to create site conditions that will allow a remedial investigation to determine that no further action is necessary. Additionally, a remedial investigation will need to be completed after the interim action. The remedial investigation will incorporate information gained through the interim action and will include information that has already been gathered.

The specific purposes of this work plan are as follows:

- Define a remedial scope of work that presents a technical and management approach, how decisions will be documented, procedures and resources to be used, and a schedule for proposed tasks.
- Identify local geologic and hydrogeologic conditions.
- Present a map showing the estimated area of pesticide (dinoseb) contamination based on previous (1996) studies.
- Provide an estimate of the volume of soil that will require remedial excavation.
- Designate a landfill for soil disposal that is in compliance with WAC 173-351 and has a liner and leachate collection system.
- Establish quality assurance (QA) and quality control (QC) procedures and a sampling plan that includes chain-of-custody procedures, testing and analytical requirements, field screening methods and turnaround time for chemical analysis.
- Identify monitoring well locations to replace monitoring wells removed during the remedial excavation and to characterize ground water conditions after the remedial action.

We have incorporated Ecology's goals for preparation of this work plan in the above tasks. Ecology's goals are outlined in a letter to Kittitas County dated June 5, 1997. This letter is attached as Appendix A.

1.3 SITE DESCRIPTION AND HISTORY

The site contained facilities used in former crop dusting operations by Midstate Aviation. The site is located near the central portion of the airport facilities, south of the east-west oriented runway. Currently, the site is fenced, undeveloped and unpaved. The site also contains:

- several 55-gallon drums and 5-gallon buckets (the contents of these containers are unknown);
- an uncovered soil stockpile (approximately 20 cubic yards);
- Four ground water monitoring wells (MW-1 through MW-4);
- A small shed located in the central portion of the site.

A pond is located south of the site, across Bowers Road. An airport fueling facility and two aboveground fuel tanks are located northwest of the site. Airport buildings and hangars are located west of the site. The parcel east of the site is undeveloped.

We understand that Bowers Field was formerly known as Kittitas County Airport and Ellensburg Airport. The airport has been in existence since the mid 1920's. We understand that the airport was expanded during 1942 by the U.S. military and used as a pilot training facility for World War II pilots. Based on our review of historical information contained in Envirogen's August 18, 1995 report, we understand that Midstate Aviation began their use of the subject site in October 1963. We understand that Midstate Aviation occupied the original main hangar building and 4 single plane hangars (demolished in 1988) in the site vicinity. We understand that crop dusting planes were stored in the four single-plane hangars. The August 1995 Envirogen report also states the following:

- "Chemicals were stowed and mixed on a wood platform" in the site area.
- "Planes were washed down in a concrete pad/drain" in the site area.
- "A small wooden shed located immediately east of the concrete pad stored a variety of chemicals, including pesticides."
- "Aircraft spraying systems were filled and drained in the vicinity of the platform/wash pad and in the pathway to the tarmac."

The results of site characterization studies related to soil and ground water contamination from the above historical activities are summarized in Sections 1.5, 1.6 and 1.7.

1.4 GEOLOGY AND HYDROGEOLOGY

The site is located in the Yakima Valley at an elevation of approximately 1,720 feet above mean sea level. The site surface is flat. The closest surface water bodies to the site include a man-made irrigation pond located south of the site, across Bowers Road, and Wilson Creek located approximately 0.5 miles southeast of the site.

Near-surface soil beneath the site consists of alluvial deposits related to Yakima River deposition. The alluvial deposits consist of overbank sands, gravels and silts. Additionally, the site is underlain by either terrace or mainstream deposits consisting of coarse gravel to cobbles.

Shallow ground water is present at approximately 4 to 7 feet below ground surface (bgs) in this area based on prior site studies. The shallow ground water flow direction is generally to the northwest based on existing ground water monitoring well data.

1.5 PREVIOUS STUDIES

We understand that Ecology, Science Applications International Corporation (SAIC), and Envirogen have conducted subsurface evaluations at the site since 1989. Ecology initially documented that dinoseb-contaminated soil was present at the site at concentrations exceeding MTCA Method B cleanup levels. Dinoseb chemical characteristics are outlined in Section 1.6. In 1990 Ecology tested ground water and found dinoseb, DDT and DDE contamination. SAIC completed a site characterization in 1993 and evaluated the treatment of dinoseb-contaminated soil using a microbial remediation technique developed by JR Simplot and Envirogen. Envirogen worked on additional site characterization studies and a remedial investigation/feasibility study (RI/FS) from 1993 through 1996 under an Ecology-Agreed Order No. DE 94TC-C4222. The results of Envirogen's initial subsurface evaluation, in 1994, were determined to be biased and unusable because of poor laboratory quality assurance/quality control (QA/QC) procedures. Therefore, they completed a supplemental site characterization in October 1996 which consisted of testing soil samples obtained from 12 test pits and testing ground water from four monitoring wells located at the site. The results of the October 1996 site characterization were used to complete this work plan and evaluate the extent and volume of contaminated soil at the site. The October 25, 1996 Envirogen report is presented in Appendix B. Chemical analytical results are summarized in Section 1.7 and 1.8.

1.6 DINOSEB CHARACTERISTICS

Dinoseb (2-(1-methylpropyl)-4,6-dinitrophenol) is a herbicide formerly used to control seedling broadleaf weeds and some grasses. Dinoseb is slightly soluble in water. However it is considered a "leacher" by the EPA. It was used on a variety of fruit and vegetable crops; specifically potatoes, apples, corn and berries (Association of Ground Water Scientists and Engineers "Agricultural Chemicals and Ground Water" dated October 10-11, 1989 and Ecology's "Chemicals Tested for in Pilot Study on Agricultural Chemicals in Ground Water" bulletin).

Trade names for dinoseb include: DNBP, dinitro, dinitro-3, dinoseb, Basanite, Chemox General, Chemox PE, Chemsect DNBP, Dinitro General, Dow General Weed Killer, Dow Selective Weed Killer, Dynamyte, Elgetol 318, Kiloseb, Nitropone C, Sinox General, Unicrop DNBP, Butaphene, Sparic, Spurge, Hel-Fire. Discontinued names include: Caldon, Dinitro, DN-289, Gebutox, Suitex Premerge, Vertac Dinitro weed killer ("Hazardous Waste Pesticides" by Ecology dated August 1989).

1.7 SOIL CHEMICAL ANALYTICAL RESULTS

A general summary of soil chemical analytical results from Envirogen's October 25, 1996 subsurface characterization report is presented below.

- Three composite soil samples were obtained from each of the 12 test pits excavated at the site.
- The composite soil samples were obtained from 0 to 2, 2 to 4 and 4 to 6 feet bgs.
- The soil samples were tested for pesticides, volatile organic compounds (VOCs) and semi-volatile compounds (SVOCs). The VOCs detected were suspected to be laboratory contaminants by Envirogen.
- Table 5 of Envirogen's October 1996 report shows that 9 of 15 pesticide and SVOC compounds were detected at concentrations exceeding MTCA Method B cleanup levels.
- Dinoseb was found to be the most predominant contaminant in site soils. Dinoseb is present at concentrations ranging from <0.2 to 17 mg/kg. Dinoseb concentrations exceeded the MTCA Method B soil cleanup level selected for this interim action (1.6 mg/kg).
- The vertical extent of dinoseb-contaminated soil is estimated to be between 4 and 7 feet bgs (the depth of shallow ground water at the site). The estimated lateral extent of dinoseb-contaminated soil exceeding 1.6 mg/kg is shown in Figure 2.

1.8 GROUND WATER CHEMICAL ANALYTICAL RESULTS

Ground water samples were obtained from the four monitoring wells at the site during July 1996 and tested for pesticides, SVOCs and VOCs. A general summary of the ground water analytical results is presented below.

- Pesticides, SVOCs and VOCs were not detected in MW-1 (crossgradient well) and MW-4 (upgradient well).
- The following compounds were detected at concentrations exceeding MTCA Method B cleanup levels in MW-2: dinoseb, b-BHC, g-BHC, and dieldrin (the common name for BHC is Lindane).
- The following compounds were detected at concentrations exceeding MTCA Method B cleanup levels in MW-3: dinoseb, aldrin, a-BHC, b-BHC, g-BHC, 4,4-DDT, and dieldrin.

1.9 CLEANUP LEVELS

Based on an evaluation of the contaminants of concern at the site, our review of previous site data and our conversations with Ecology, MTCA Method B soil cleanup levels will be used for this remedial action. Dinoseb will be used as the indicator compound for this site using a MTCA Method B cleanup level of 1.6 mg/kg. Using dinoseb as the indicator compound for this site is consistent with WAC 173-340-708, subpart 2 "Selection of indicator hazardous substances" Chapter 173-340 WAC dated January 1996).

After the completion of the remedial soil excavation (discussed in Section 2.0), MTCA Method B cleanup levels will be used to evaluate ground water contamination at the site.

2.0 INTERIM ACTION DESIGN AND CONSTRUCTION DETAILS

2.1 GENERAL

The estimated lateral extent of site soil's containing dinoseb at concentrations greater than 1.6 mg/kg is presented in Figure 2. The lateral extent of the planned remedial excavation is slightly wider than the area of dinoseb-contaminated soil shown in Figure 2 to (1) account for excavation sidewall sloping, and (2) provide additional assurance that cleanup levels will be achieved. For the purposes of preparing this corrective action plan the following has been assumed:

- Dinoseb concentrations exceeding 1.6 mg/kg are present in soil between the site surface and approximately 7 feet bgs (the maximum depth of the shallow water table).
- A total area of approximately 19,000 square feet will require remedial excavation.
- Approximately 5,000 cubic yards (in-place volume) of soil will be excavated.
- Approximately 60 percent (3,000 cubic yards) of the excavated soil will be oversized material (cobbles) separated from the contaminated soil using a screen.
- Dinoseb concentrations in ground water will be reduced to less than MTCA Method B cleanup levels approximately one to three years after removing the contaminated soil.

2.2 SOIL EXCAVATION AND OFF SITE DISPOSAL/RECYCLING

Soil in the remedial excavation area shown in Figure 2 will be removed to the depth of the shallow water table (approximately 4 to 7 feet beneath the surface). The excavated soil will be passed through a screen with a sieve size of 1 inch x 1 inch. The oversized material will be temporarily stockpiled on site. Soil passing through the screen will be loaded directly onto trucks for transportation to Rabanco's Roosevelt Regional Landfill in Klickitat County for permitted disposal. Specific additional soil excavation and disposal tasks will include the following:

2.2.1 Soil Characterization for Disposal

Existing chemical analytical data from 1996 studies and Ecology's "soil designation" letter dated June 6, 1997 (Appendix A) will be used to obtain landfill permission to dispose of the pesticide contaminated soil.

2.2.2 Utility Check

A utility check will be completed to identify the location of underground utilities in the planned work area. The underground utilities will be protected during remedial activities.

2.2.3 Preliminary Ground Water Monitoring

Prior to the beginning of excavation, the existing monitoring wells (MW-1 through MW-4) will be measured for ground water elevation to provide for the calculation of ground water flow direction and gradient. This measurement will assist in determining the best location for replacement wells to be installed after remedial excavation activities.

2.2.4 Preconstruction Meeting

A preconstruction meeting will be held on site with representatives from Kittitas County, Ecology, selected contractors and the consultant of record to (1) review the work plan, health and safety requirements, site security and logistics provisions, and (2) select a temporary stockpile location for the cobbles removed during soil screening.

2.2.5 Excavation Strategy

The excavation will continue until the shallow water table is reached and chemical analytical results indicate that dinoseb and other pesticide concentrations are less than MTCA Method B cleanup levels at the lateral limits of the excavation. The excavation activities and soil conditions will be documented as described in Section 7.0.

2.2.6 Soil Sampling

Soil samples obtained from the walls and base of the excavation will be collected by a field representative that enters the excavation (provided that 1:1 sidewall slopes are maintained) and collects samples with a decontaminated hand trowel. If safe working conditions cannot be maintained, soil samples will be collected with the excavator bucket.

2.2.7 Excavation Area Fencing

The limits of the excavation area will be secured by a fence with a locking gate to prevent access to the excavation area during remedial activities.

2.2.8 Sidewall Slope

A 1H:1V (horizontal to vertical) slope will be maintained for the excavation sidewalls.

2.2.9 Backfill

The excavation will be backfilled using "clean" imported granular fill. The cobbles screened from the excavated material will be used as backfill but will not be placed in contact with the ground water. Each lift of backfill will not exceed a loose thickness of 12 inches. Each lift from the excavation base to a depth of 4 feet below grade will be compacted with vibratory

equipment and achieve at least 90 percent of the maximum dry density as determined by the American Society for Testing and Materials (ASTM) D1557. Each lift above a depth of 4 feet to grade will be compacted with vibratory equipment and achieve at least 95 percent of the maximum dry density as determined by ASTM D1557.

2.2.10 Site Surface Cleanup

Debris and equipment from the remedial activities will be removed from the site after work is completed. The site will be left in a neat and orderly condition at the conclusion of the project.

2.3 MONITORING WELL CONSTRUCTION

Four monitoring wells will be constructed at the approximate locations shown in Figure 2 after remedial excavation and backfilling activities are completed. The monitoring wells will be used to monitor depth to ground water and obtain ground water samples for chemical analysis (Section 5.2).

Two of the wells are intended to replace existing wells (MW-2 and MW-3) that will be removed during remedial excavation. Two of the wells will be constructed downgradient of the excavation area. Existing wells MW-1 and MW-4 will be maintained to provide crossgradient and upgradient data points, respectively. Monitoring well construction details are described below.

2.3.1 Drilling

Four soil borings will be drilled to a depth of approximately 15 feet bgs using drilling equipment.

2.3.2 Well Casing and Monument

A 2-inch-diameter PVC monitoring well will be constructed in each in the boring. The well will be screened between 3 and 15 feet bgs. The well will be completed with an above grade monument. The wells will be constructed in accordance with WAC 173-160. A variance will be obtained prior to monitoring well construction.

2.3.3 Well Development

Each well will be developed after construction using a combination of surging and bailing techniques. Well development will be completed to the satisfaction of the Ecology inspector. Well development water will be temporarily stored on site in labeled 55-gallon drums and characterized for subsequent off-site disposal at a permitted facility.

2.3.4 Well Surveying

The casing rim and ground surface at each well will be surveyed to the nearest 0.01 foot relative to the casing elevation established for MW-1.

2.4 HEALTH AND SAFETY

All personnel working within the fenced area will have OSHA 40-hour health and safety training and perform the work in accordance with a site-specific health and safety plan that meets Occupational Safety and Health Administration (OSHA) standards specified in 29 CFR Part 1910.120, 29 CFR Part 1926 (Excavation Standards), and Washington Administrative Code (WAC) 296-62-300 standards.

3.0 PERMITTING REQUIREMENTS AND SECURITY

We understand that no permits will be required in order to complete the remedial action as described in this work plan.

4.0 PUBLIC NOTIFICATION

A public notice will be prepared prior to the remedial action as specified by Ecology.

5.0 SAMPLING AND MONITORING PLAN

5.1 REMEDIAL EXCAVATION SOIL SAMPLING PROGRAM

The soil excavation will be performed by a bonded remedial contractor. All soil sampling will be conducted by a geologist or engineer with experience in conducting remedial excavations in the state of Washington. The geologist or engineer will be on site during all excavation activities to evaluate the extent of contamination and advise the excavator when a clean perimeter is reached based on chemical analytical results.

The geologist or engineer will examine and classify the soils encountered, and prepare a detailed sketch of the remedial excavation and sample locations. Soils encountered will be classified visually in general accordance with ASTM D-2488-90. Specific details regarding sample locations and handling are described below:

5.1.1 Sample Locations

Discrete soil samples will be obtained from the base of the remedial excavation at grid locations separated by approximately 20 feet (one sample per 400 square feet). Discrete soil samples also will be obtained at approximately 20 foot intervals (lateral) from the excavation walls at depths of approximately 0.5 and 2.5 feet beneath the site surface and just above the water table.

5.1.2 Sample Collection and Handling

Soil samples obtained from the walls and base of the excavation will be collected by a field representative that enters the excavation (provided that 1:1 sidewall slopes are maintained) and collects samples with a decontaminated hand trowel. If safe working conditions cannot be maintained, soil samples will be collected with the excavator bucket. The samples submitted for chemical analysis will be obtained from the central portion of the bucket using a hand trowel.

Samples submitted for chemical analysis will be placed in jars provided by a certified analytical laboratory. The jars will be filled completely to eliminate headspace. The samples will be labeled sequentially. The labels will include the date, time and depth that the sample was obtained. The soil samples will be placed in a cooler containing blue ice for transport to the analytical laboratory. Chain-of-custody procedures will be followed in transporting the soil samples to the laboratory. Sample numbers, dates, times and sample depth will be transferred onto the chain-of-custody by the field representative. The chain-of-custody will be signed and dated by the field representative and included with the samples during transport to the laboratory.

5.1.3 Equipment Decontamination

Sampling equipment will be decontaminated between each sampling event using a trisodium phosphate wash and a distilled water rinse. If a backhoe is used to collect soil samples, the backhoe bucket will be pressure-washed prior to collection of each soil sample. All decontamination water will be temporarily stored on site in labelled 55-gallon drums and characterized for subsequent off-site disposal at a permitted facility.

5.2 GROUND WATER MONITORING PROGRAM

Ground water conditions will be monitored at each well location on site once a quarter until chemical analytical results indicate that pesticide concentrations are less than MTCA cleanup levels for at least 4 consecutive quarters. A reduced monitoring schedule will be implemented if pesticide concentrations show a consistent decrease over time. Each ground water monitoring event will consist of the following elements.

5.2.1 Depth Measurement

Prior to starting remedial excavation activities, the monitoring well casings will be resurveyed and the depth to ground water will be measured relative to the casing rim in each monitoring well using a water level indicator. Ground water elevations will be calculated using the depth measurement and the established casing rim elevation. After remedial excavation and monitoring well installation, each well will be resurveyed and monitored as described above.

5.2.2 Sample Collection and Handling

Ground water samples will be obtained from each monitoring well with a disposable bailer after at least three saturated well casing volumes of ground water have been purged from each well and measured parameters of pH, temperature and conductivity have stabilized. A duplicate ground water sample will be obtained for chemical analysis from the well with the highest historic concentrations of pesticide. The purge water will be temporarily stored in labelled 55-gallon drums and characterized for subsequent off-site disposal at a permitted facility. A new bailer and rope will be used for each sampling attempt.

The ground water samples will be placed in vials/bottles provided by a certified analytical laboratory. The vials/bottles will be filled completely to eliminate headspace. The samples will be labeled sequentially. The labels will include the date and time that the sample was obtained. The samples will be placed in a cooler containing blue ice for transport to the analytical laboratory. Chain-of-custody procedures will be followed in transporting the samples to the laboratory. Sample numbers, dates and times will be transferred onto the chain-of-custody by the field representative. The chain-of-custody will be signed and dated by the field representative and included with the samples during transport to the laboratory

5.2.3 Equipment Decontamination

The water level indicator will be decontaminated between each sampling event using a trisodium phosphate wash and a distilled water rinse. A rinseate blank sample will be obtained during each sampling event for chemical analysis. All decontamination water will be temporarily stored on site in labelled 55-gallon drums and characterized for subsequent off-site disposal at a permitted facility.

5.3 CHEMICAL ANALYTICAL TESTING

Soil and ground water samples will be submitted to an analytical laboratory with a certified quality assurance and quality control program that conforms to the guidelines of EPA Manual SW-846, EPA QAMS-004/80, EPA QA/R-5 and ISO/IED Guide 25. Normal turnaround (approximately 10 working days) will be requested for chemical analytical results.

The soil samples (approximately 80) will be submitted for chemical analysis of dinoseb using EPA Method 8270. Additionally, selected soil samples (approximately 8) will be submitted for chemical analysis of Aldrin, BHCs, DDT and dieldrin using EPA Method 8080/8081. The number of soil samples may be reduced at Ecology's discretion based on site conditions. Chemical analytical quality assurance and quality control will be reviewed by the consultant of record as described in Appendix B.

6.0 PROJECT MANAGEMENT, DATA EVALUATION AND DOCUMENTATION

The following will be completed during coordination, oversight and reporting of the project:

- All communications and project decisions between Kittitas County, Ecology, contractors and consultants will be documented in writing and filed by date and time.
- All field operations will be documented in a daily field report completed by an experienced geologist or engineer. The daily field report will include a daily summary of operations, site sketches, field screening results, copies of chain-of-custodies and photographs.
- Chemical analytical data will be evaluated based relative to MTCA cleanup levels described in Section 1.8. Additionally, a QA/QC evaluation will be completed for each data package.

- A written report describing the remedial excavation and soil disposal will be prepared and include (1) figures showing the site vicinity, a site plan showing the extent and depth of excavation, sample locations, a cross section, and the monitoring well logs, and (2) tables presenting the chemical analytical results of soil samples obtained from the excavation limits and the first round of ground water sampling. Two draft copies and three final copies of the remedial action report will be submitted to the Kittitas County and Ecology.
- A written report summarizing the results of each full year of quarterly ground water monitoring will be prepared and provided to Kittitas County and Ecology.
- All reports will be peer reviewed for accuracy prior to being submitted to Kittitas County and Ecology.
- All other necessary documentation and communications with Ecology, required to obtain an NFA for the site, will be provided.

7.0 SCHEDULE

Excavation is expected to commence within three weeks of receiving authorization to proceed. Excavation and backfilling activities are expected to take ten days to complete unless estimated soil volumes are exceeded. The draft summary report will be submitted to Kittitas County and Ecology three weeks after receiving the final chemical analytical results. A conceptual project schedule is presented as Appendix C.

8.0 REFERENCES

The following references were used in preparing this corrective action plan:

- "The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC" dated January 1996.
- OSHA Standards 29 CFR Part 1910.120.
- EPA "National Functional Guidelines for Organic Data Review" dated 1991.
- EPA "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses" dated 1988.

9.0 LIMITATIONS

We have prepared this work plan for use by the Kittitas County, their authorized contractors and Ecology. The work plan is not intended for use by others and the information contained herein is not applicable to other sites.

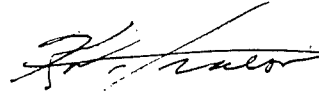
Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this work plan was prepared. No warranty or other conditions, express or implied, should be understood.

Respectfully submitted,

GeoEngineers, Inc.



David A. Cook
Project Geologist



Kurt R. Fraese
Associate

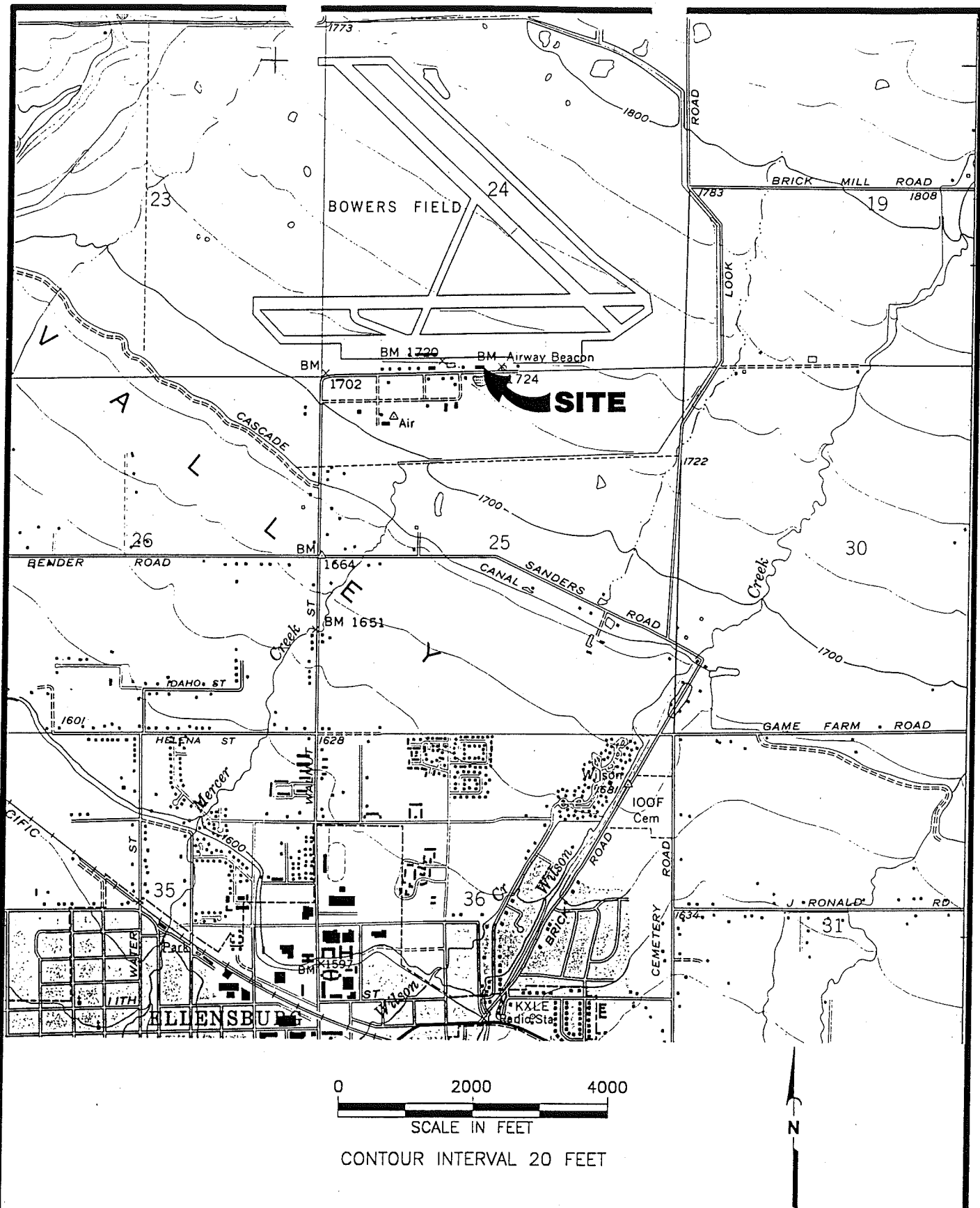
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06/27/97

4867-002-85

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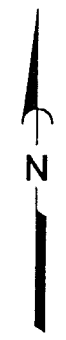
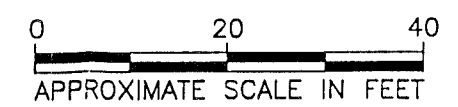
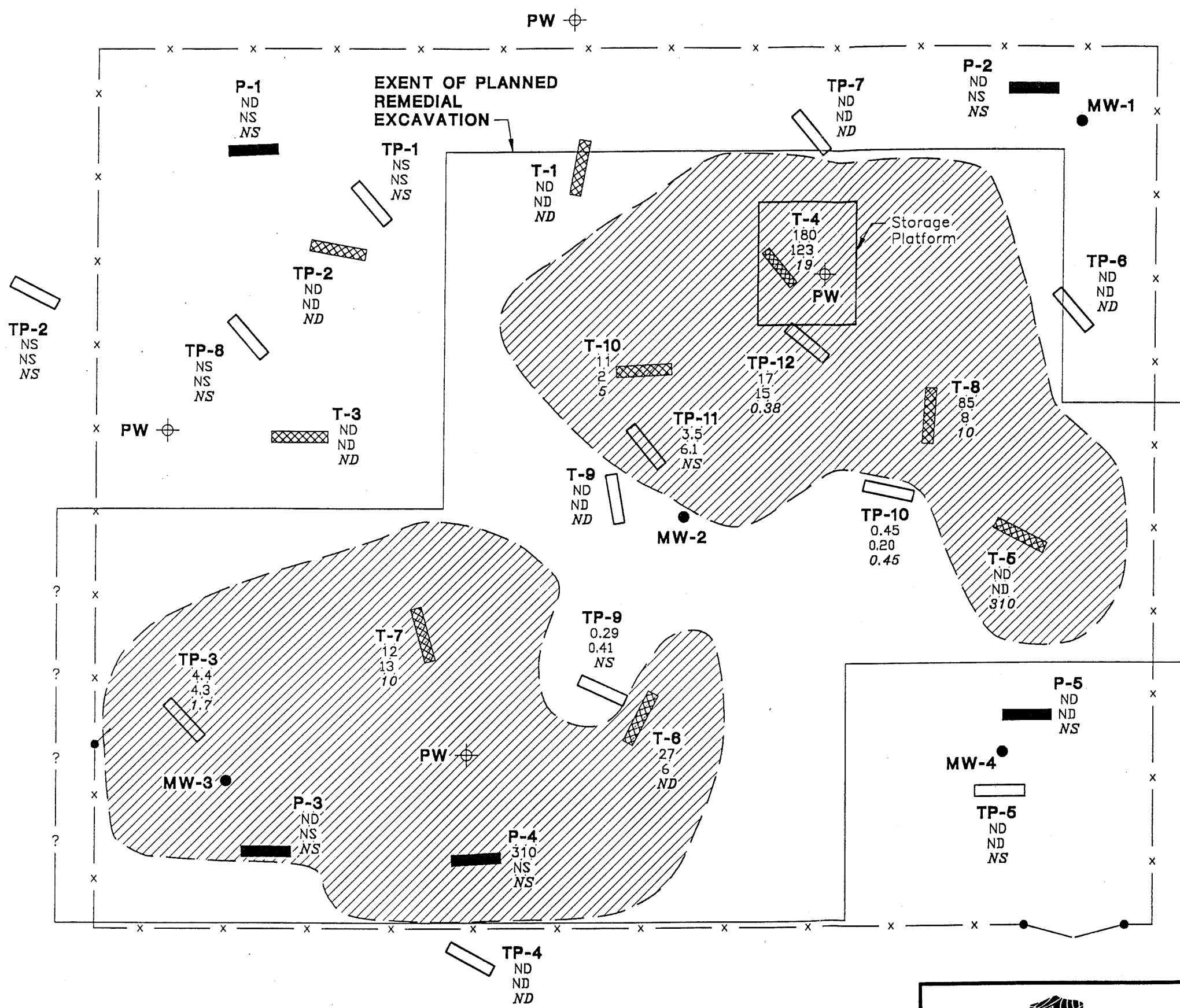


Reference: USGS 7.5' topographic quadrangle map "Ellensburg North, Wash." photorevised 1978.

Geo  Engineers

VICINITY MAP

FIGURE 1



EXPLANATION:

- TP-1 [Symbol] TEST PIT (EXCAVATED 8/96)
- P-1 [Symbol] FORMER PIT (EXCAVATED 8/94)
- T-1 [Symbol] FORMER TRENCH (EXCAVATED 8/94)
- [Hatched Area Symbol] APPROXIMATE AREA WHERE DINOSEB CONCENTRATIONS EXCEED THE MTCA METHOD B CLEANUP LEVEL OF 1.6 mg/kg BASED ON 1996 STUDY RESULTS
- MW-1 ● MONITORING WELL
- PW ⊕ PROPOSED MONITORING WELL
- x — FENCE
- mg/kg MILLIGRAMS PER KILOGRAM

DINOSEB RESULTS	
0.0	DINOSEB CONCENTRATION FROM 0-2 FT BGS (mg/kg)
0.0	DINOSEB CONCENTRATION FROM 2-4 FT BGS (mg/kg)
0.0	DINOSEB CONCENTRATION FROM 4-6 FT BGS (mg/kg)
ND	NOT DETECTED
NS	NOT SAMPLED
BGS BELOW GROUND SURFACE	

- NOTES:
1. Trench, Well, and Pit locations are approximate.
 2. The scale represents the dimensions of the lot only. Other items shown are approximate.
 3. The analytical results shown represent the soil sampling events conducted August 1994 and August, 1996 by Envirogen, Inc.

Reference: Drawings entitled, "Figure 2, 3, and 4, Dinoseb Concentrations from 0 to 2, 2 to 4, and 4 to 6 ft. bgs," dated 10/01/96, provided by Envirogen, Inc.



SITE PLAN

FIGURE 2



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3401 • (509) 575-2490

RECEIVED

JUN 06 1997

KITTITAS COUNTY
DEPT. OF PUBLIC WORKS

June 5, 1997

Ms. Marla Parsel
Administrative Assistant
Kittitas County - Department of Public Works
205 West Fifth Avenue, Room 108
Ellensburg, Washington 98926

Dear Ms. Parsel:

RE: Interim Action at Midstate Aviation Cleanup Site

This letter is a follow-up to our meeting with Brian Dick of Ecology's Hazardous Waste and Toxic Reduction Program on Wednesday, June 4, 1997. Attached is a copy of the memo from Brian Dick concerning the waste designation of the soils at the Midstate Aviation site. The data included with the memo excludes data from the 1994 sampling of the Midstate Aviation site due to the problems with quality assurance for the laboratory analysis (please see my letter to you dated April 2, 1996).

The clarification of the waste designation provided by the attached memo allows the material to be handled as a solid waste and provides Kittitas County the ability to take an Interim Action of removing contaminated soils from the Midstate Aviation site to a landfill in order to protect ground water. Before Kittitas County undertakes such an Interim Action, the existing Agreed Order between Kittitas County and Ecology will need to be amended.

To provide for the amendment of the Agreed Order, Kittitas County will need to prepare a workplan that describes the actions to be taken. The amendment to the current Agreed Order will only be a page or two and the work plan for the Interim Action will be incorporated by amendment into section 4, "Work to be Performed".

Kittitas County and Ecology need to work closely to develop an Interim Action work plan that can be agreed on without delay. Ecology does have examples of Interim Action work plans and the work and sampling plans incorporate information developed under the current agreed order. Care needs be taken to exclude the 1994 sampling data that is not supported by proper quality assurance and quality control for the development of the interim action work plan.

Ms. Marla Parsel

June 5, 1997

Page 2

The work plan for the Interim Action needs to include:

- a map showing the area of contamination exceeding 1.6 mg/kg dinoseb contamination;
- an estimation of the amount of material that will be excavated;
- designated landfill for soil disposal that is in compliance with WAC 173-351 that has a liner and leachate collection system;
- a sampling and analysis plan for confirming the removal of dinoseb contaminated soils; and
- the locations of monitoring wells to replace the monitoring wells that are to be removed during the excavation of contaminated soils.

Further modification to the Agreed Order will provide for the modification of the Remedial Investigation and Feasibility Study based on the results of the Interim Action. The goal of the Interim Action is to produce site conditions that will result in no further actions at the conclusion of the Remedial Investigation and Feasibility Study. It is expected that the ground water monitoring following the Interim Action will show a decline in the concentrations of dinoseb in the ground water as the result of the removal of the source contaminated soils.

If you have any questions, please call me at (509) 454-7840.

Sincerely,



Mark Peterschmidt

Site Manager

Toxics Cleanup Program

Enclosure

Department of Ecology

June 6, 1997

DRAFT

TO: Mark Peterschmidt
Toxics Cleanup Program

FROM: Brian Dick
Hazardous Waste and Toxics Reduction Program

SUBJECT: Midstate Aviation, Ellensburg, Washington - Soil Designation

Based on a review the attached sampling data from the Midstate site the soils would not designate as a dangerous waste under WAC 173-303 and may be disposed of as a solid waste with the permission of the receiving landfill. The constituent uniformly present in the highest concentration, dinoseb, is on the WAC 173-303-9903 discarded commercial chemical list under the hazardous waste code P020. This waste code (P020) does not apply to these soils for the following reasons:

- There is no record of disposal of dinoseb where it is the sole active ingredient in a formulation;
- Dinoseb salts were often used, which do not carry the P020 waste code;
- Dinoseb was often mixed with other active ingredients and therefore would not carry the P020 waste code;
- Records indicate the proper reuse of tank rinsates as intended and the washing of the exterior of planes, neither of which would result in a P020 waste.

Based on the attached data these soils do not designate according to the state criteria of WAC 173-303-100. Also, no data indicates that these soils would be a hazardous waste under the Toxicity Characteristic Leaching Procedure of WAC 173-303-090.

As stated above, based upon the data attached, and the waste designation completed and outlined in this memo, these soils do not designate as dangerous waste under WAC 173-303, the dangerous waste regulations.

If you have any questions, please do not hesitate to call me at 575-2477.

BD:rrp

Attachment

DRAFT

APPENDIX A

TCLD
.02 pp

high has t

Price:

- many of these were mixed then applied
- note in the file that rinse waters from tanks were applied and plane exteriors were washed off

APPENDIX B



Despite these possible inconsistencies and the variable nature of soil sampling, ENVIROGEN feels the data can be used collectively to gain a reasonable estimate as to the three dimensional extent of impacted soils above the water table within the study area.

Figure 5 represents the composited extent of impacted soils from 0 to 6 ft. bgs for the five contaminants that were detected in the ground water at concentrations above the Method B "ground water" clean up levels. These five compounds include Aldrin, BHCs (including alpha, beta and gamma), DDT, Dieldrin and Dinoseb. The soil concentrations above the Method B "soil" and "soil to ground water" levels for the August 1994 and 1996 sampling events for the five compounds are represented on Figure 5 along with their respective clean up levels.

Figure 5 shows that approximately one-half the Site contains concentrations above the more stringent "soil to ground water" clean up levels while less than one-quarter of the Site is underlain by concentrations exceeding the "soil" clean up levels.

It is ENVIROGEN's opinion the extent of the ground water contamination is likely not widespread and not impacting human health or the environment. Based on this, we recommend the study area be capped and a deed restriction enforced for this area.

We will contact you shortly to discuss this letter. In the meantime, if you have any questions, please feel free to call me at (609) 936-9300 or, if time differences cause you an inconvenience, please feel free to call me at home at (609) 778-9833. Of course, you are also free to call Ms. Marla Parsel of Kittitas County at (509) 962 7523. We appreciate your help on this matter.

Sincerely,
ENVIROGEN, INC.

Stewart H. Abrams, P.E.
Operations Manager

c: David Wagner, ENVIROGEN
Harch Gill, Ph.D., President & CEO, ENVIROGEN
Marla Parsel, Kittitas County

Attachments

\\public\projects\47029\doctr3.doc

TABLE 1
GROUND WATER ELEVATION DATA

MIDSTATE AVIATION
KITITAS COUNTY
ELLENSBURG, WASHINGTON

WELL NO.	TOP OF CASING ELEVATION (FT)	DEPTH TO WATER (FT)			WATER TABLE ELEVATION (		
		07/18/96	08/06/96	08/07/96	07/18/96	08/06/96	08/07/96
MW-1	1727.32	6.76	7.05	7.04	1720.56	1720.27	1720.27
MW-2	1724.00	3.82	4.15	4.12	1720.18	1719.85	1719.85
MW-3	1722.97	3.61	4.05	3.98	1719.36	1718.92	1718.92
MW-4	1724.62	4.14	4.21	4.16	1720.48	1720.41	1720.41

i:/public/projects/47029/gwelev.wk4

TABLE 2
SUMMARY OF GROUND WATER
ANALYTICAL RESULTS - JULY 18, 1996

MIDSTATE AVIATION
KITITAS COUNTY
ELLENSBURG, WASHINGTON

MONITORING WELL MW-1

LAB ID	COMPOUND	RESULTS	ANALYZED BY
	PESTICIDES		
96-E005139	a-BHC	0.059	CASCADE
	SEMI-VOCs		
96-E005139	DI-N-BP	1.7	SOUND
96-E005139	BIS(2-EH)P	30	SOUND
	VOCs		
96-E005139	CHLOROMETHANE	0.74	SOUND
96-E005139	ACETONE	19	SOUND
96-E005139	1,2-DCE	5.4	SOUND

MONITORING WELL MW-2

LAB ID	COMPOUND	RESULTS	ANALYZED BY
	PESTICIDES		
96-E005140	4,4'-DDE	0.096	CASCADE
96-E005140	a-BHC	0.064	CASCADE
96-E005140	b-BHC	0.21	CASCADE
96-E005140	DIELDRIN	0.175	CASCADE
96-E005140	DINOSEB	55	CASCADE
96-E005140	DINOSEB	55	SOUND
96-E005140	ENDOSULFAN II	0.1	CASCADE
96-E005140	g-BHC	0.101	CASCADE
	SEMI-VOCs		
96-E005140	DI-N-BP	0.58	SOUND
96-E005140	BIS(2-EH)P	2.5	SOUND
	VOCs		
96-E005140	CHLOROMETHANE	0.97	SOUND
96-E005140	1,2-DCE	4.6	SOUND

MONITORING WELL MW-3

LAB ID	COMPOUND	RESULTS	ANALYZED BY
	PESTICIDES		
96-E005141	4,4'-DDE	0.114	CASCADE
96-E005141	4,4'-DDT	0.541	CASCADE
96-E005141	a-BHC	0.079	CASCADE
96-E005141	ALDRIN	0.34	CASCADE
96-E005141	b-BHC	0.65	CASCADE
96-E005141	DIELDRIN	0.179	CASCADE
96-E005141	DINOSEB	120	CASCADE
96-E005141	DINOSEB	120	SOUND
96-E005141	ENDOSULFAN I	0.243	CASCADE
96-E005141	ENDOSULFAN II	0.209	CASCADE
	SEMI-VOCs		
96-E005141	BIS(2-EH)P	12	SOUND
	VOCs		
96-E005141	VOCs	ND	SOUND

TABLE 2 (Continued)
SUMMARY OF GROUND WATER
ANALYTICAL RESULTS - JULY 18, 1996

MIDSTATE AVIATION
 KITTITAS COUNTY
 ELLENSBURG, WASHINGTON

MONITORING WELL MW-4

LAB ID	COMPOUND	RESULTS	ANALYZED BY
	PESTICIDES		
96-E005142	4,4'-DDT	0.206	CASCADE
96-E005142	a-BHC	0.062	CASCADE
96-E005142	DINOSEB	5	CASCADE
96-E005142	DINOSEB	4.5	SOUND
	SEMI-VOCs		
96-E005142	BIS(2-EH)P	2.5	SOUND
	VOCs		
96-E005142	ACETONE	16	SOUND
96-E005142	1,2-DCE	5.3	SOUND

FIELD BLANK

LAB ID	COMPOUND	RESULTS	ANALYZED BY
	PESTICIDES		
96-E005143	DINOSEB	9	CASCADE
96-E005143	DINOSEB	8.8	SOUND
	SEMI-VOCs		
96-E005143	NAPHTHALENE	1	SOUND
96-E005143	BIS(2-EH)P	1.9	SOUND
	VOCs		
96-E005143	VOCs	ND	SOUND

TRIP BLANK

LAB ID	COMPOUND	RESULTS	ANALYZED BY
	VOCs		
96-E005144	VOCs	ND	SOUND

1. All results reported in ug/l unless otherwise indicated.
2. The above samples were collected July 18, 1996
3. 1,2-DCE = 1,2-DICHLOROETHENE
4. BIS(2-EH)P = BIS(2-ETHYLHEXYL)PHTHALATE
5. DI-N-BP = DI-N-BUTYLPHTHALATE

TABLE 3
COMPARISON OF GROUND WATER ANALYTICAL RESULTS
TO WADOE METHOD B CLEAN UP LEVELS

MIDSTATE AVIATION
 KITTITAS COUNTY
 ELLENSBURG, WASHINGTON

COMPOUND	WADOE METHOD B (1) CLEAN UP LEVELS FOR GROUND WATER (ug/l)	MAXIMUM CONC. (ug/l)	NO. OF SAMPLES ABOVE WADOE METHOD B CLEAN UP LEVELS
PESTICIDES			
ALDRIN	0.005	0.34	1
a-BHC	0.067	0.079	1
b-BHC	0.067	0.65	2
g-BHC	0.067	0.101	1
4,4'-DDT	0.26	0.541	1
4,4'-DDE	0.26	0.114	0
DINOSEB	16	120	2
DIELDRIN	0.005	0.179	2
ENDOSULFAN I	96	0.243	0
ENDOSULFAN II	96	0.209	0
SEMI-VOCs			
BIS(2-EH)P	6.25	30	2
DI-N-BP	1600	1.7	0
VOCs			
ACETONE	800	19	0
CHLOROMETHANE	3.37	0.97	0
1,2-DCE	80	5.4	0

1. The values shown represent the worst case with respect to carcinogen vs. non-carcinogen concentrations as published in the WADOE MTCA Method B Clean up Levels document dated February 28, 1996.
2. BIS(2-EH)P = BIS(2-ETHYLHEXYL)PHthalATE
3. DI-N-BP = DI-N-BUTYLPHthalATE
4. 1,2-DCE = 1,2-DICHLOROETHENE
5. BHC is a common name for Lindane
6. The ground water samples were collected July 18, 1996.

**TABLE 4
SUMMARY OF SOIL ANALYTICAL RESULTS**

MIDSTATE AVIATION
KITITAS COUNTY
ELLENSBURG, WASHINGTON

TEST PIT NO. 1

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
96-E005994	06-Aug-96	S/01/0'-2'	PESTICIDES	ND	CASCADE
96-E005995	06-Aug-96	S/01/2'-4'	PESTICIDES	ND	CASCADE
96-E005996	06-Aug-96	S/01/4'-6'	PESTICIDES	ND	CASCADE

TEST PIT NO. 2

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
96-E005997	06-Aug-96	S/02/0'-2'	PESTICIDES	ND	CASCADE
96-E005998	06-Aug-96	S/02/2'-4'	PESTICIDES	ND	CASCADE
96-E005999	06-Aug-96	S/02/4'-5'	PESTICIDES	ND	CASCADE

TEST PIT NO. 3

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006000	06-Aug-96	S/03/0'-2'	DDE	0.115	CASCADE
			DDT	0.236	CASCADE
			ENDOSULFAN II	0.030	CASCADE
			DIELDRIN	0.340	CASCADE
96-E006003	06-Aug-96	S/03/2'-4'	DDT	0.010	CASCADE
96-E006005	06-Aug-96	S/03/4.5'-5.5'	DDE	0.034	CASCADE
			DDT	0.081	CASCADE
			ENDOSULFAN II	0.007	CASCADE
			DIELDRIN	0.065	CASCADE
			SEMI-VOCs		
96-E006001	06-Aug-96	S/03/0'-2'	DI-N-BP	0.120	SOUND
			DINOSEB	4.400	SOUND
96-E006002	06-Aug-96	S/03/2'-4'	DI-N-BP	0.170	SOUND
			DINOSEB	4.300	SOUND
96-E006004	06-Aug-96	S/03/4'-4.5'	DI-N-BP	0.170	SOUND
			DINOSEB	1.700	SOUND

TEST PIT NO. 4

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006006	07-Aug-96	S/04/0'-2'	DI-N-BP	0.100	SOUND
96-E006008	07-Aug-96	S/04/0'-2'	DI-N-BP	0.160	SOUND
96-E006007	07-Aug-96	S/04/2'-4'	DI-N-BP	0.180	SOUND

TEST PIT NO. 5

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006010	07-Aug-96	S/05/0'-2'	DI-N-BP	0.150	SOUND
96-E006009	07-Aug-96	S/05/2'-4'	DI-N-BP	0.180	SOUND

TEST PIT NO. 6

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006012	07-Aug-96	S/06/0'-2'	DI-N-BP	0.130	SOUND
96-E006011	07-Aug-96	S/06/2'-4'	DI-N-BP	0.150	SOUND
96-E006013	07-Aug-96	S/06/4'-6'	DI-N-BP	0.120	SOUND

TEST PIT NO. 7

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006015	07-Aug-96	S/07/0'-2'	PESTICIDES	ND	CASCADE
96-E006018	07-Aug-96	S/07/2'-4'	PESTICIDES	ND	CASCADE
96-E006017	07-Aug-96	S/07/4'-6'	DDE	0.005	CASCADE
			DDT	0.024	CASCADE
			DIELDRIN	0.001	CASCADE
			SEMI-VOCs		
96-E006014	07-Aug-96	S/07/0'-2'	DI-N-BP	0.100	SOUND
96-E006016	07-Aug-96	S/07/2'-4'	DI-N-BP	0.150	SOUND

TABLE 4
SUMMARY OF SOIL ANALYTICAL RESULTS

MIDSTATE AVIATION
KITITAS COUNTY
ELLENSBURG, WASHINGTON

TEST PIT NO. 1

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
96-E005994	06-Aug-96	S/01/0'-2'	PESTICIDES	ND	CASCADE
96-E005995	06-Aug-96	S/01/2'-4'	PESTICIDES	ND	CASCADE
96-E005996	06-Aug-96	S/01/4'-6'	PESTICIDES	ND	CASCADE

TEST PIT NO. 2

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
96-E005997	06-Aug-96	S/02/0'-2'	PESTICIDES	ND	CASCADE
96-E005998	06-Aug-96	S/02/2'-4'	PESTICIDES	ND	CASCADE
96-E005999	06-Aug-96	S/02/4'-5'	PESTICIDES	ND	CASCADE

TEST PIT NO. 3

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006000	06-Aug-96	S/03/0'-2'	DDE	0.115	CASCADE
			DDT	0.236	CASCADE
			ENDOSULFAN II	0.030	CASCADE
			DIELDRIN	0.340	CASCADE
96-E006003	06-Aug-96	S/03/2'-4'	DDT	0.010	CASCADE
96-E006005	06-Aug-96	S/03/4.5'-5.5'	DDE	0.034	CASCADE
			DDT	0.081	CASCADE
			ENDOSULFAN II	0.007	CASCADE
			DIELDRIN	0.065	CASCADE
			SEMI-VOCs		
96-E006001	06-Aug-96	S/03/0'-2'	DI-N-BP	0.120	SOUND
			DINOSEB	4.400	SOUND
96-E006002	06-Aug-96	S/03/2'-4'	DI-N-BP	0.170	SOUND
			DINOSEB	4.300	SOUND
96-E006004	06-Aug-96	S/03/4'-4.5'	DI-N-BP	0.170	SOUND
			DINOSEB	1.700	SOUND

TEST PIT NO. 4

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006006	07-Aug-96	S/04A/0'-2'	DI-N-BP	0.100	SOUND
96-E006008	07-Aug-96	S/04/0'-2'	DI-N-BP	0.160	SOUND
96-E006007	07-Aug-96	S/04/2'-4'	DI-N-BP	0.180	SOUND

TEST PIT NO. 5

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006010	07-Aug-96	S/05/0'-2'	DI-N-BP	0.150	SOUND
96-E006009	07-Aug-96	S/05/2'-4'	DI-N-BP	0.180	SOUND

TEST PIT NO. 6

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006012	07-Aug-96	S/06/0'-2'	DI-N-BP	0.130	SOUND
96-E006011	07-Aug-96	S/06/2'-4'	DI-N-BP	0.150	SOUND
96-E006013	07-Aug-96	S/06/4'-6'	DI-N-BP	0.120	SOUND

TEST PIT NO. 7

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006015	07-Aug-96	S/07/0'-2'	PESTICIDES	ND	CASCADE
96-E006018	07-Aug-96	S/07/2'-4'	PESTICIDES	ND	CASCADE
96-E006017	07-Aug-96	S/07/4'-6'	DDE	0.005	CASCADE
			DDT	0.024	CASCADE
			DIELDRIN	0.001	CASCADE
			SEMI-VOCs		
96-E006014	07-Aug-96	S/07/0'-2'	DI-N-BP	0.100	SOUND
96-E006016	07-Aug-96	S/07/2'-4'	DI-N-BP	0.150	SOUND
96-E006019	07-Aug-96	S/07/4'-6'	DI-N-BP	0.120	SOUND

TABLE 4 (Continued)
SUMMARY OF SOIL ANALYTICAL RESULTS

MIDSTATE AVIATION
KITTITAS COUNTY
ELLENSBURG, WASHINGTON

TEST PIT NO. 8

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006023	07-Aug-96	S/08/0'-2'	b-BHC	0.050	CASCADE
96-E006020	07-Aug-96	S/08/2'-4'	b-BHC	0.014	CASCADE
			DIELDRIN	0.001	CASCADE
96-E006022	07-Aug-96	S/08A/2'-4'	b-BHC	0.008	CASCADE
			DIELDRIN	0.001	CASCADE
96-E006021	07-Aug-96	S/08/4'-5.8'	DDE	0.004	CASCADE
			b-BHC	0.033	CASCADE
			DIELDRIN	0.006	CASCADE

TEST PIT NO. 9

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006025	08-Aug-96	S/09/0'-2'	DI-N-BP	0.120	SOUND
			DINOSEB	0.290	SOUND
96-E006024	08-Aug-96	S/09/2'-4'	BENZOIC ACID	0.300	SOUND
			DI-N-BP	0.078	SOUND
			DINOSEB	0.410	SOUND

TEST PIT NO. 10

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			SEMI-VOCs		
96-E006027	08-Aug-96	S/10/0'-2'	DI-N-BP	0.090	SOUND
			DINOSEB	0.450	SOUND
96-E006028	08-Aug-96	S/10/2'-4'	DI-N-BP	0.160	SOUND
			DINOSEB	0.200	SOUND
96-E006026	08-Aug-96	S/10/4'-6'	DI-N-BP	0.087	SOUND
			DINOSEB	0.450	SOUND

TEST PIT NO. 11

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006029	08-Aug-96	S/11/0'-2'	b-BHC	0.006	CASCADE
			HEPTACHLOR	0.009	CASCADE
96-E006031	08-Aug-96	S/11/2'-4'	PESTICIDES	ND	CASCADE
			SEMI-VOCs		
96-E006032	08-Aug-96	S/11/0'-2'	DI-N-BP	0.250	SOUND
			DINOSEB	3.500	SOUND
96-E006030	08-Aug-96	S/11/2'-4'	DI-N-BP	0.230	SOUND
			DINOSEB	6.100	SOUND

TABLE 4 (Continued)
SUMMARY OF SOIL ANALYTICAL RESULTS

MIDSTATE AVIATION
KITTITAS COUNTY
ELLENSBURG, WASHINGTON

TEST PIT NO. 12

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS	ANALYZED BY
			PESTICIDES		
96-E006038	08-Aug-96	S/12/0'-2'	DDD	0.225	CASCADE
			DDT	0.141	CASCADE
			ENDOSULFAN I	0.993	CASCADE
			ENDOSULFAN II	0.885	CASCADE
			DIELDRIN	0.382	CASCADE
			ENDRIN	0.192	CASCADE
96-E006035	08-Aug-96	S/12/2'-4'	DDE	0.003	CASCADE
			d-BHC	0.040	CASCADE
96-E006039	08-Aug-96	S/12A/2'-4'	ENDOSULFAN I	0.018	CASCADE
			ENDOSULFAN II	0.016	CASCADE
			DIELDRIN	0.008	CASCADE
			ENDRIN	0.006	CASCADE
96-E006033	08-Aug-96	S/12/4'-6'	DDT	0.041	CASCADE
			DIELDRIN	0.350	CASCADE
			SEMI-VOCs		
96-E006037	08-Aug-96	S/12/0'-2'	2,4-DCP	8.900	SOUND
			DI-N-BP	0.200	SOUND
			BIS(2-EH)P	0.086	SOUND
			DINOSEB	17.000	SOUND
96-E006036	08-Aug-96	S/12/2'-4'	2,4-DCP	0.290	SOUND
			DI-N-BP	0.180	SOUND
			DINOSEB	15.000	SOUND
96-E006040	08-Aug-96	S/12A/2'-4'	2,4-DCP	1.100	SOUND
			DI-N-BP	0.200	SOUND
			DINOSEB	15.000	SOUND
96-E006034	08-Aug-96	S/12/4'-6'	DI-N-BP	0.170	SOUND
			DINOSEB	0.380	SOUND
			VOCs		
96-E006053	08-Aug-96	S/12/0'-2'	VOCs	ND	SOUND
96-E006052	08-Aug-96	S/12/2'-4'	ACETONE	0.020	SOUND
96-E006055	08-Aug-96	S/12/2'-4'	VOCs	ND	SOUND
96-E006054	08-Aug-96	S/12/4'-6'	4-M-2-P	0.027	SOUND

TABLE 4 (Continued)
SUMMARY OF SOIL ANALYTICAL RESULTS

MIDSTATE AVIATION
KITTITAS COUNTY
ELLENSBURG, WASHINGTON

EQUIPMENT RINSE

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS (mg/l)	ANALYZED BY
			PESTICIDES		
96-E006049	07-Aug-96	ER	PESTICIDES	ND	CASCADE
96-E006048	08-Aug-96	ER3	PESTICIDES	ND	CASCADE
96-E006044	08-Aug-96	ER	PESTICIDES	ND	CASCADE
			SEMI-VOCs		
96-E006041	08-Aug-96	ER3	DI-N-BP	0.001	SOUND
			BIS(2-EH)P	0.001	SOUND
96-E006042	08-Aug-96	ER	DI-N-BP	0.001	SOUND
			BIS(2-EH)P	0.001	SOUND
96-E006043	08-Aug-96	ER	DI-N-BP	0.002	SOUND
			BUTYL BP	0.001	SOUND
			BIS(2-EH)P	0.001	SOUND
			VOCs		
96-E006045	08-Aug-96	ER	VOCs	ND	SOUND

TRIP BLANK

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS (mg/l)	ANALYZED BY
			VOCs		
96-E006047	02-Aug-96	TB	1,1-DCE	0.150	SOUND

FIELD BLANK

LAB ID	SAMPLE DATE	SAMPLE ID/ DEPTH	COMPOUND	RESULTS (mg/l)	ANALYZED BY
			PESTICIDES		
96-E006051	08-Aug-96	FB	PESTICIDES	ND	CASCADE
			SEMI-VOCs		
96-E006050	08-Aug-96	FB	DI-N-BP	0.001	SOUND
			BIS(2-EH)P	0.001	SOUND
			VOCs		
96-E006046	08-Aug-96	FB	VOCs	ND	SOUND

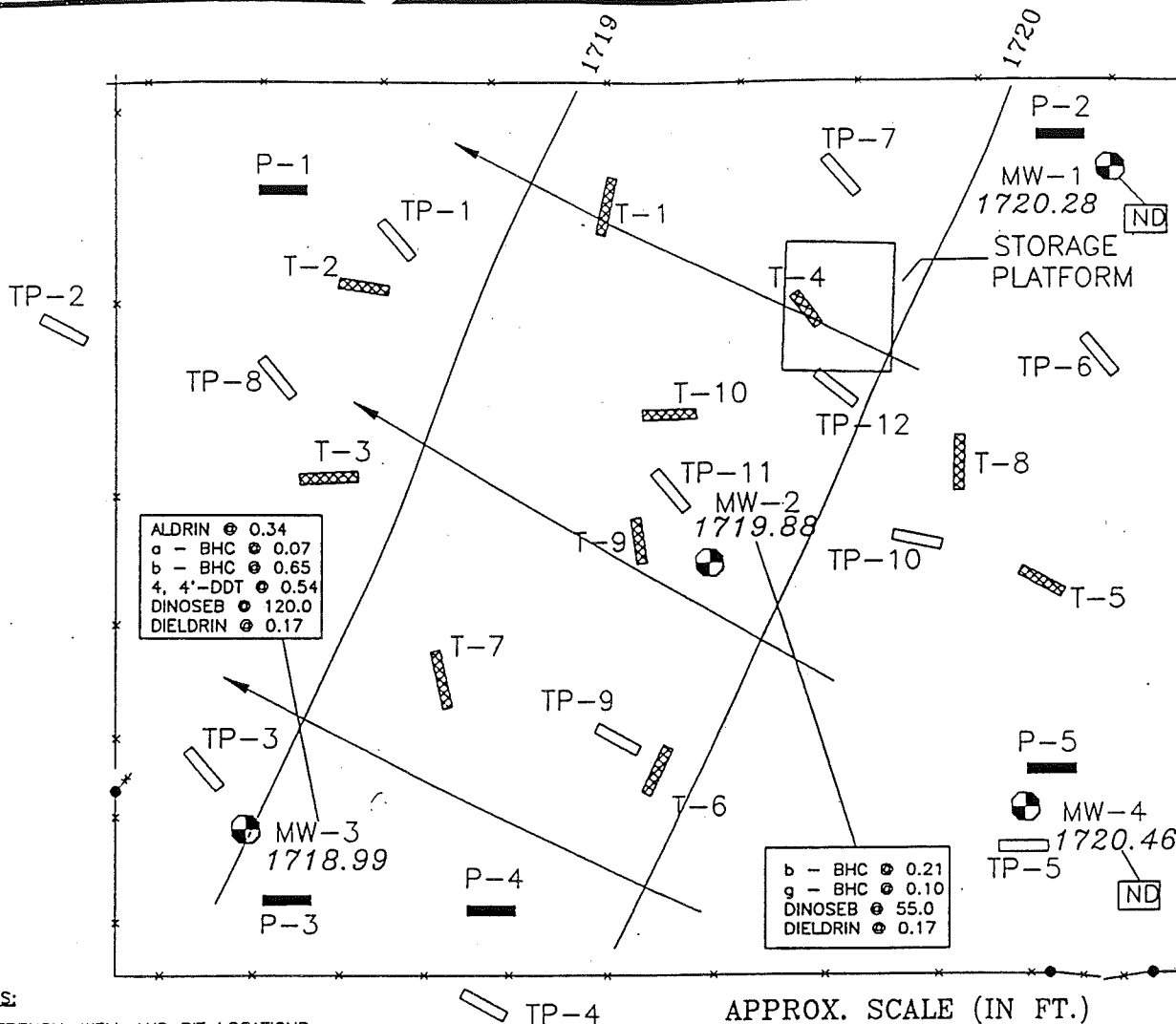
1. All results reported in mg/kg unless otherwise indicated.
2. ND = Not detected
3. DI-N-BP = DI-N-BUTYLPHTHALATE
4. BIS(2-EH)P = BIS(2-ETHYLHEXYL)PHTHALATE
5. 2,4-DCP = 2,4-DICHLOROPHENOL
6. 4-M-2-P = 4-METHYL-2-PENTANONE
7. BUTYL BP = BUTYLBENZYLPHTHALATE

TABLE 5
COMPARISON OF SOIL ANALYTICAL RESULTS TO WADOE
METHOD B CLEAN UP LEVELS

MIDSTATE AVIATION
KITITITAS COUNTY
ELLENSBURG, WASHINGTON

COMPOUND	WADOE METHOD B CLEAN UP LEVELS(1) SOIL (mg/kg)	SOIL TO GROUND WATER (mg/kg)	MAXIMUM CONC. (mg/kg)	NO. OF SAMPLES ABOVE	
				WADOE METHOD B CLEAN UP LEVELS SOIL	SOIL TO GROUND WATER
PESTICIDES					
b-BHC	0.769	0.0067	0.05	0	3
d-BHC	0.769	0.0067	0.04	0	1
DDD	4.17	0.036	0.225	0	1
DDE	2.94	0.026	0.115	0	2
DDT	2.94	0.026	0.236	0	4
DIELDRIN	0.062	0.0005	0.382	4	7
ENDOSULFAN I	480.00	9.60	0.993	0	0
ENDOSULFAN II	480.00	9.60	0.885	0	0
ENDRIN	24.00	0.48	0.192	0	0
HEPTACHLOR	0.22	0.0019	0.009	0	1
SEMI-VOCs					
BENZOIC ACID	320000.00	6400	0.30	0	0
BIS(2-EH)P	71.40	0.62	0.086	0	0
2,4-DCP	240.00	4.80	8.9	0	1
DI-N-BP	8000.00	160.00	0.25	0	0
DINOSEB	80.00	1.60	17	0	8
VOCs					
ACETONE	8000.00	80.00	0.02	0	0
4-M-2-P	6400.00	64.00	0.027	0	0

1. The values shown represent the worst case with respect to carcinogen vs. non-carcinogen concentrations as published in the WADOE MTCA Method B Clean up Levels document dated February 28, 1996.
2. BIS(2-EH)P = BIS(2-ETHYLHEXYL)PHTHALATE
3. 2,4-DCP = 2,4-DICHLOROPHENOL
4. DI-N-BP = DI-N-BUTYLPHTHALATE
5. 4-M-2-P = 4-METHYL-2-PENTANONE
6. BHC is a common name for Lindane
7. The soil samples were collected August, 1996.



NOTES:

- TRENCH, WELL AND PIT LOCATIONS ARE APPROXIMATE.
- THE SCALE REPRESENTS THE DIMENSIONS OF THE LOT ONLY. OTHER ITEMS SHOWN ARE APPROXIMATE.
- THE GROUND WATER SAMPLES WERE COLLECTED AUGUST 7, 1996. SEE TABLE 3 FOR THE WADOE METHOD B CLEAN UP LEVELS.

LEGEND:

- TEST PIT (EXCAVATED 8/96)
- FORMER PIT (EXCAVATED 8/94)
- FORMER TRENCH (EXCAVATED 8/94)
- MONITORING WELL
- 1720.46 WATER TABLE ELEVATION (IN FT. ABOVE MEAN SEA LEVEL) MEASURED AUGUST 7, 1996
- 1720 LINE OF EQUAL WATER TABLE ELEVATION (FT.)
- APPARENT GROUND WATER FLOW DIRECTION
- b - BHC @ 0.21 CONTAMINANT AND CONCENTRATION (in ug/l) DETECTED ABOVE WADOE METHOD B CLEAN UP LEVELS (SEE WADOE MTCA METHOD B CLEAN UP LEVELS DOCUMENT DATED 2/28/96)
- FENCE
- ND NOT DETECTED

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ENVIROGEN

PRINCETON RESEARCH CENTER
4100 QUAKERBRIDGE RD.
LAWRENCEVILLE, N.J. 08648

MIDSTATE AVIATION, ELLENSBURG, WA

FIGURE 1

WATER TABLE ELEVATION CONTOUR
MAP AND GROUND WATER CONCENTRATIONS
MEASURED AUGUST 7, 1996

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ENVIROGEN PROJECT NO.
47029

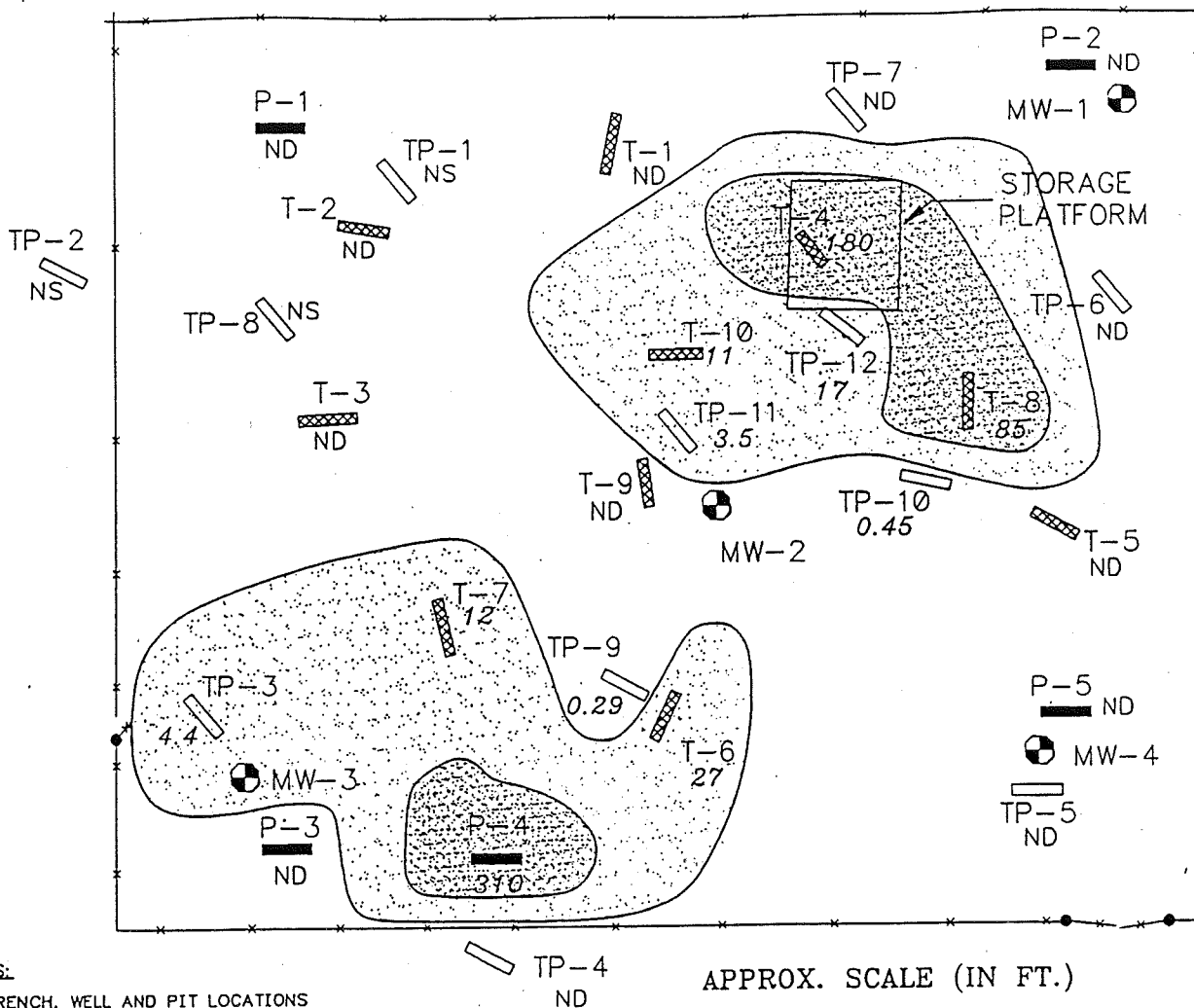
DRAWN BY LG DATE 10/1/96

CHK'D BY APP'D BY ENGR'G

SCALE: AS SHOWN APP'D BY PROJ. MGR. APP'D BY

SIZE A DRAWING NO. 47029Y06 REV. A

47029Y5A.DWG 10/21/96 (01)



NOTES:

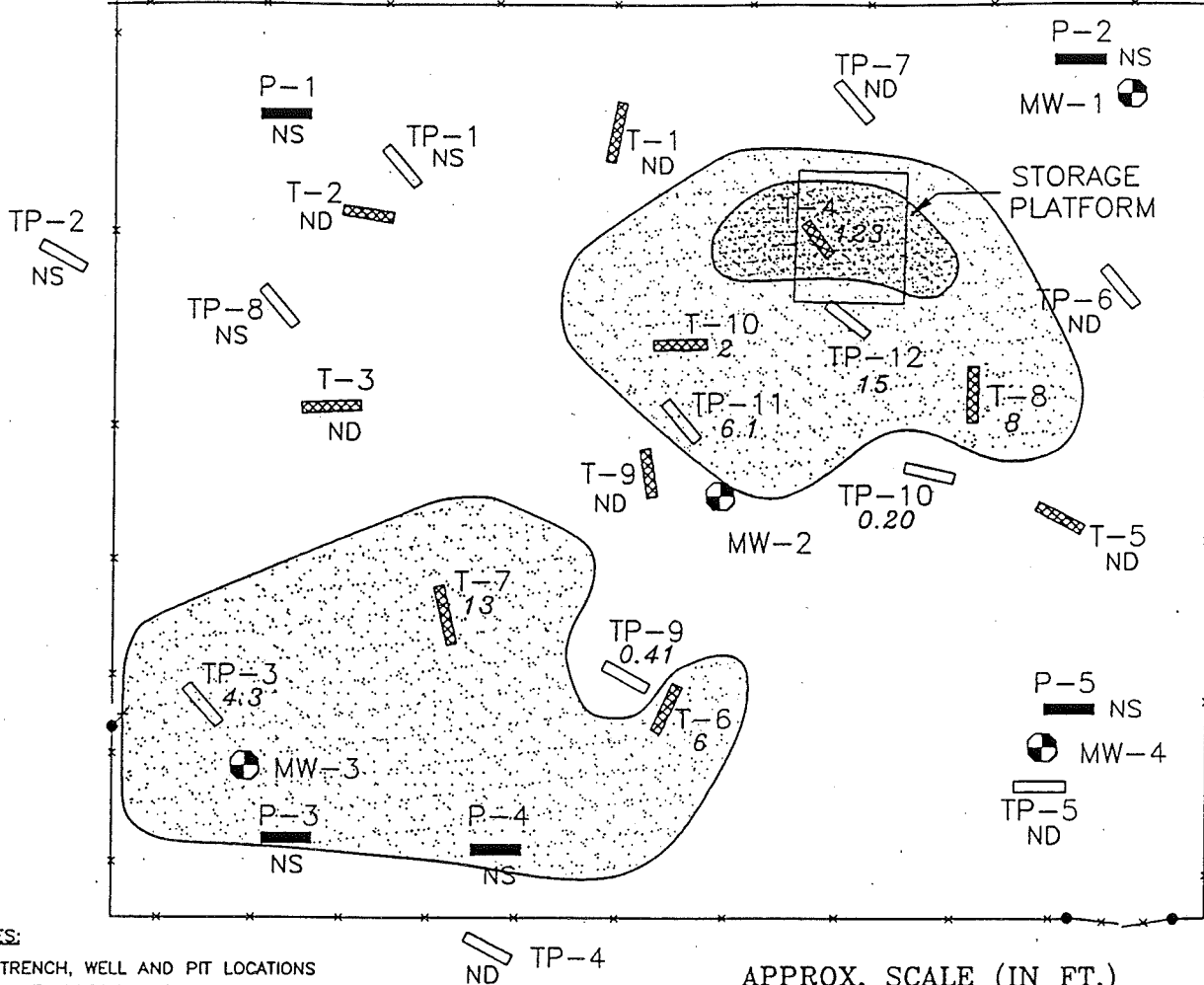
1. TRENCH, WELL AND PIT LOCATIONS ARE APPROXIMATE.
2. THE SCALE REPRESENTS THE DIMENSIONS OF THE LOT ONLY. OTHER ITEMS SHOWN ARE APPROXIMATE.
3. THE ANALYTICAL RESULTS SHOWN REPRESENT THE SOIL SAMPLING EVENTS CONDUCTED AUGUST, 1994 AND AUGUST, 1996.
4. SEE WADSWORTH MTCA METHOD B CLEAN UP LEVELS DATED 2/28/96.

LEGEND:

- TEST PIT (EXCAVATED 8/96)
- FORMER PIT (EXCAVATED 8/94)
- FORMER TRENCH (EXCAVATED 8/94)
- APPROXIMATE AREA WHERE DIOXIN AND FURAN CONCENTRATIONS EXCEEDED THE WADSWORTH METHOD B "SOIL TO GROUND WATER" CLEAN UP LEVEL OF 1.6 mg/kg
- APPROXIMATE AREA WHERE DIOXIN AND FURAN CONCENTRATIONS EXCEEDED THE WADSWORTH METHOD B "SOIL" CLEAN UP LEVEL OF 80 mg/kg
- MONITORING WELL
- FENCE
- ND NOT DETECTED
- NS NOT SAMPLED
- 0.45 DIOXIN CONCENTRATION FROM 0-2 FT BGS (mg/kg)

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MIDSTATE AVIATION, ELLENSBURG, WA			ENVIROGEN PROJECT NO. 47029		
FIGURE 2 DIOXIN AND FURAN CONCENTRATIONS FROM 0 TO 2 FT. BGS			DRAWN BY LG DATE 10/1/96 CHK'D BY APP'D BY ENGR'G. SCALE: APP'D BY PROJ. MGR. AS SHOWN APP'D BY		
SIZE DRAWING NO. REV.			A 47029Y07 A		

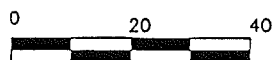
47029Y7A.DWG 10/21/96 (01)



NOTES:

1. TRENCH, WELL AND PIT LOCATIONS ARE APPROXIMATE.
2. THE SCALE REPRESENTS THE DIMENSIONS OF THE LOT ONLY. OTHER ITEMS SHOWN ARE APPROXIMATE.
3. THE ANALYTICAL RESULTS SHOWN REPRESENT THE SOIL SAMPLING EVENTS CONDUCTED AUGUST, 1994 AND AUGUST, 1996.
4. SEE WADSWORTH MTCA METHOD B CLEAN UP LEVELS DATED 2/28/96.

APPROX. SCALE (IN FT.)

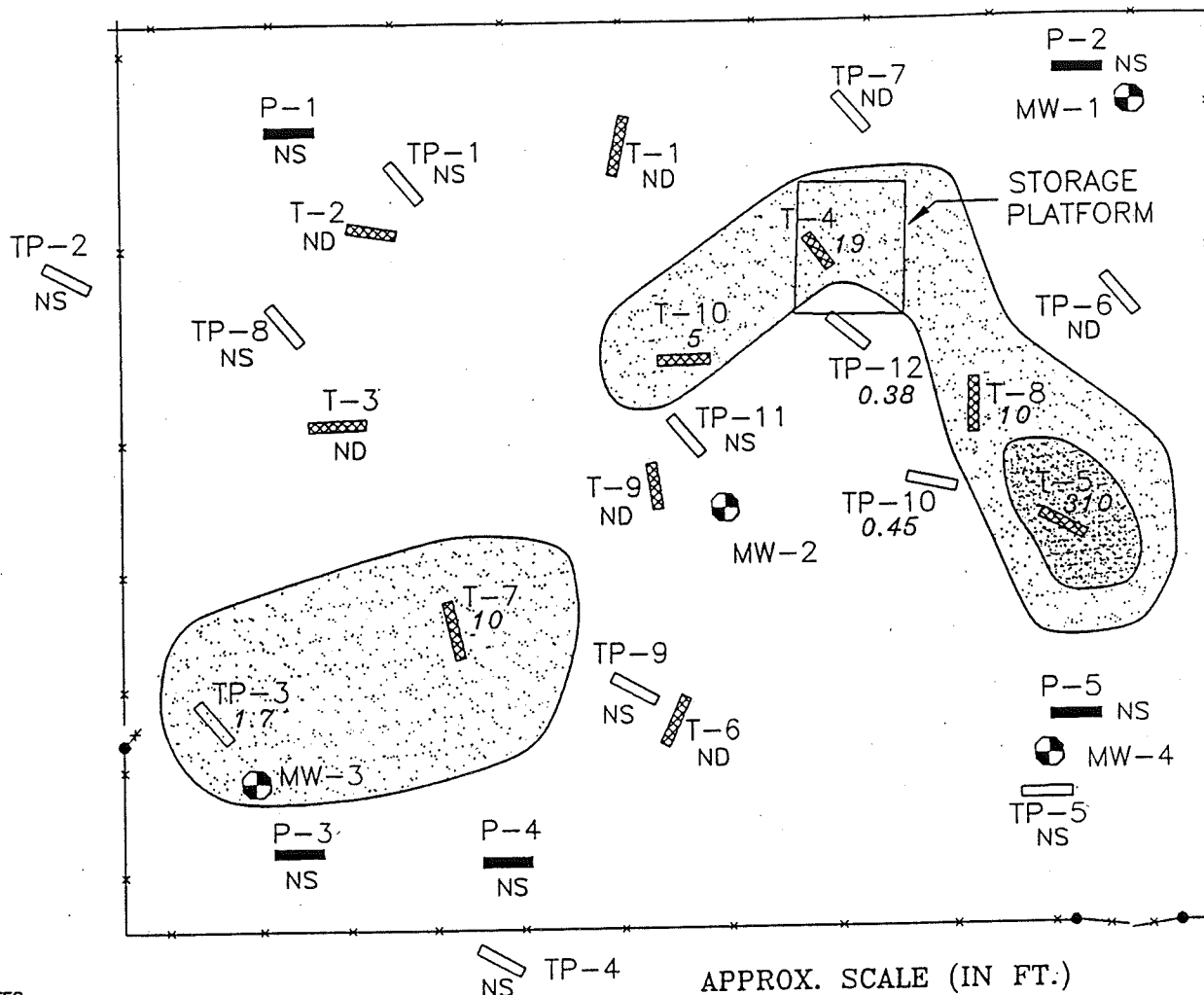


LEGEND:

- TEST PIT (EXCAVATED 8/96)
- FORMER PIT (EXCAVATED 8/94)
- FORMER TRENCH (EXCAVATED 8/94)
- MONITORING WELL
- APPROXIMATE AREA WHERE DINOSEB CONCENTRATIONS EXCEED THE WADSWORTH METHOD B "SOIL TO GROUND WATER" CLEAN UP LEVEL OF 1.6 mg/kg
- APPROXIMATE AREA WHERE DINOSEB CONCENTRATIONS EXCEED THE WADSWORTH METHOD B "SOIL" CLEAN UP LEVEL OF 80 mg/kg
- FENCE
- NS NOT SAMPLED
- ND NOT DETECTED
- 123 DINOSEB CONCENTRATION FROM 2 - 4 FT. BGS(mg/kg)

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MIDSTATE AVIATION, ELLENSBURG, WA			ENVIROGEN PROJECT NO. 47029		
FIGURE 3 DINOSEB CONCENTRATIONS FROM 2 TO 4 FT. BGS			DRAWN BY LG DATE 10/1/96 CHK'D BY APP'D BY ENGR'G. SCALE: AS SHOWN APP'D BY PROJ. MGR. APP'D BY		
SIZE	DRAWING NO.		REV.		
A	47029Y08		A		

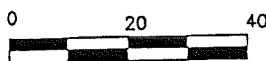
47029Y8A.DWG 10/21/96 (01)



NOTES:

1. TRENCH, WELL AND PIT LOCATIONS ARE APPROXIMATE.
2. THE SCALE REPRESENTS THE DIMENSIONS OF THE LOT ONLY. OTHER ITEMS SHOWN ARE APPROXIMATE.
3. THE ANALYTICAL RESULTS SHOWN REPRESENT THE SOIL SAMPLING EVENTS CONDUCTED AUGUST, 1994 AND AUGUST, 1996.
4. SEE WADUE MTCA METHOD B CLEAN UP LEVELS DATED 2/28/96.

APPROX. SCALE (IN FT.)

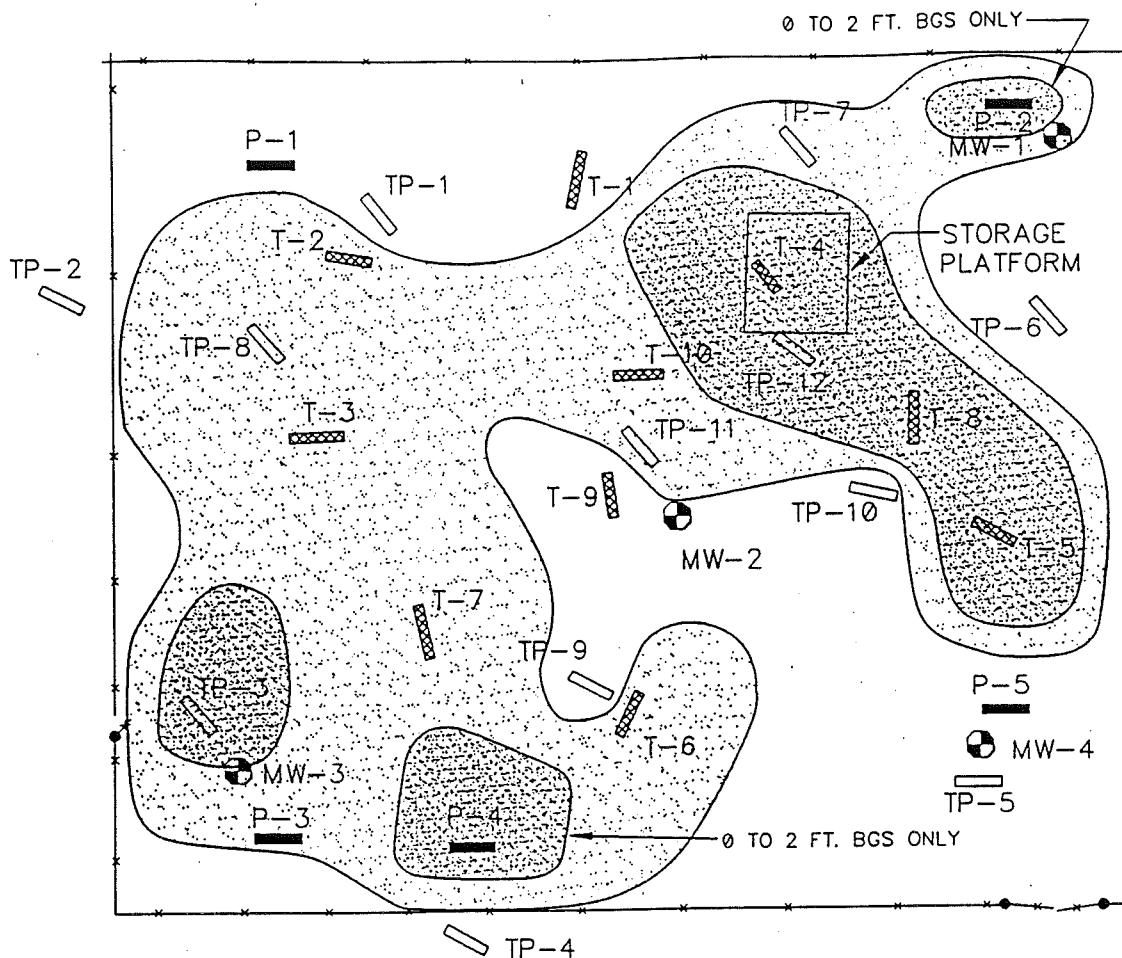


LEGEND:

- TEST PIT (EXCAVATED 8/96)
- FORMER PIT (EXCAVATED 8/94)
- FORMER TRENCH (EXCAVATED 8/94)
- APPROXIMATE AREA WHERE DINOSEB CONCENTRATIONS EXCEEDED THE WADUE METHOD B "SOIL TO GROUND WATER" CLEAN UP LEVEL OF 1.6 mg/kg
- APPROXIMATE AREA WHERE DINOSEB CONCENTRATIONS EXCEEDED THE WADUE METHOD B "SOIL" CLEAN UP LEVEL OF 80 mg/kg
- MONITORING WELL
- FENCE
- NS NOT SAMPLED
- ND NOT DETECTED
- 19 DINOSEB CONCENTRATION FROM 4 - 6 FT. BGS(mg/kg)

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			CHK'D BY		APP'D BY ENGR'G.	
FIGURE 4 DINOSEB CONCENTRATIONS FROM 4 TO 6 FT. BGS			SCALE: AS SHOWN		APP'D BY PROJ. MGR. APP'D BY	
			SIZE A	DRAWING NO. 47029Y09		REV. A

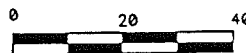
47029Y8A.DWG 10/18/96 (01)



NOTES:

1. TRENCH, WELL AND PIT LOCATIONS ARE APPROXIMATE.
2. THE SCALE REPRESENTS THE DIMENSIONS OF THE LOT ONLY. OTHER ITEMS SHOWN ARE APPROXIMATE.
3. THE IMPACTED AREAS SHOWN REPRESENT THE SOIL SAMPLING EVENTS CONDUCTED AUGUST, 1994 AND AUGUST, 1996.
4. SEE WADOE MTCA METHOD B CLEANUP LEVELS DATED 2/28/96.
5. THE COMPOUNDS DETECTED IN THE SOIL ABOVE THE WADOE METHOD B CLEAN UP LEVELS INCLUDE ALDRIN, BHCs, DDT, DIELDRIN, AND DINOSEB. DIELDRIN AND DINOSEB WERE THE PREDOMINANT COMPOUNDS DETECTED. SEE THE ABOVE TABLE FOR THE METHOD B CLEAN UP LEVELS.

APPROX. SCALE (IN FT.)



WADOE METHOD B CLEAN UP LEVELS (MG/KG)

COMPOUND	SOIL	SOIL TO GROUND WATER
ALDRIN	0.058	0.0005
BHCs	0.769	0.0067
DDT	2.94	0.026
DIELDRIN	0.62	0.0005
DINOSEB	80.0	1.6

LEGEND:

- TEST PIT (EXCAVATED 8/96)
- FORMER PIT (EXCAVATED 8/94)
- FORMER TRENCH (EXCAVATED 8/94)
- APPROXIMATE AREA WHERE SOIL CONCENTRATIONS EXCEED WADOE METHOD B "SOIL TO GROUND WATER" CLEAN UP LEVELS FROM 0 TO 6 FT. BGS
- APPROXIMATE AREA WHERE SOIL CONCENTRATIONS EXCEED WADOE METHOD B "SOIL" CLEAN UP LEVELS FROM 0 TO 6 FT. BGS
- MONITORING WELL
- FENCE

A	10/21/96	LG	ISSUED FOR REPORT	CHK'D	APP'D
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FIGURE 5 APPROXIMATE AREA WHERE SOIL CONCENTRATIONS EXCEED THE WADOE METHOD B CLEAN UP LEVELS FROM 0 TO 6 FT. BGS			DRAWN BY LG DATE 10/1/96		
47029Y10.DWG 10/21/96 (01)			CHK'D BY APP'D BY ENGR'G.		
SCALE: AS SHOWN			APP'D BY PROJ. MGR. APP'D BY		
SIZE	DRAWING NO.		REV.		
A	47029Y10		A		



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3401 • (509) 575-2490

June 5, 1997

RECEIVED
JUN 06 1997
KITITAS COUNTY
DEPT. OF PUBLIC WORKS

Ms. Marla Parsel
Administrative Assistant
Kittitas County - Department of Public Works
205 West Fifth Avenue, Room 108
Ellensburg, Washington 98926

Dear Ms. Parsel:

RE: Interim Action at Midstate Aviation Cleanup Site

This letter is a follow-up to our meeting with Brian Dick of Ecology's Hazardous Waste and Toxic Reduction Program on Wednesday, June 4, 1997. Attached is a copy of the memo from Brian Dick concerning the waste designation of the soils at the Midstate Aviation site. The data included with the memo excludes data from the 1994 sampling of the Midstate Aviation site due to the problems with quality assurance for the laboratory analysis (please see my letter to you dated April 2, 1996).

The clarification of the waste designation provided by the attached memo allows the material to be handled as a solid waste and provides Kittitas County the ability to take an Interim Action of removing contaminated soils from the Midstate Aviation site to a landfill in order to protect ground water. Before Kittitas County undertakes such an Interim Action, the existing Agreed Order between Kittitas County and Ecology will need to be amended.

To provide for the amendment of the Agreed Order, Kittitas County will need to prepare a workplan that describes the actions to be taken. The amendment to the current Agreed Order will only be a page or two and the work plan for the Interim Action will be incorporated by amendment into section 4, "Work to be Performed".

Kittitas County and Ecology need to work closely to develop an Interim Action work plan that can be agreed on without delay. Ecology does have examples of Interim Action work plans and the work and sampling plans incorporate information developed under the current agreed order. Care needs be taken to exclude the 1994 sampling data that is not supported by proper quality assurance and quality control for the development of the interim action work plan.

Ms. Marla Parsel

June 5, 1997

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The work plan for the Interim Action needs to include:

- a map showing the area of contamination exceeding 1.6 mg/kg dinoseb contamination;
- an estimation of the amount of material that will be excavated;
- designated landfill for soil disposal that is in compliance with WAC 173-351 that has a liner and leachate collection system;
- a sampling and analysis plan for confirming the removal of dinoseb contaminated soils; and
- the locations of monitoring wells to replace the monitoring wells that are to be removed during the excavation of contaminated soils.

Further modification to the Agreed Order will provide for the modification of the Remedial Investigation and Feasibility Study based on the results of the Interim Action. The goal of the Interim Action is to produce site conditions that will result in no further actions at the conclusion of the Remedial Investigation and Feasibility Study. It is expected that the ground water monitoring following the Interim Action will show a decline in the concentrations of dinoseb in the ground water as the result of the removal of the source contaminated soils.

If you have any questions, please call me at (509) 454-7840.

Sincerely,



Mark Peterschmidt

Site Manager

Toxics Cleanup Program

Enclosure

APPENDIX C

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QUALITY ASSURANCE/QUALITY CONTROL PLAN

Chain-of-custody procedures will be followed during transport of the soil and ground water samples to a certified analytical laboratory. The samples will be held in cold storage pending extraction and/or analysis.

The laboratory will maintain an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory will use a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also will use data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals will be included in the laboratory reports. The laboratory will compare each group of samples with the existing data quality goals and note any exceptions in the laboratory report. The data quality exceptions documented by the laboratory in the laboratory reports will be reviewed using the applicable data validation guidelines from the following documents: "National Functional Guidelines For Organic Data Review" draft dated 1991 and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses" dated 1988.

Significant data quality exceptions will be documented in the laboratory reports and their effect on study results will be discussed in the remedial action report.